

ST. PBN PUBLIC SCHOOL
ANNUAL EXAMINATION (SAMPLE PAPERS)
CLASS – XI
SUBJECT – ENGLISH

TIME- 3 HRS.

MM. 80

GENERAL INSTRUCTIONS:

1. ALL QUESTIONS ARE COMPULSORY.
2. FOLLOW THE INSTRUCTIONS GIVEN WITH ALL QUESTIONS.

SECTION A READING (26 MARKS)

Q1. Read the following passage carefully and answer the questions that follow. 12M

Travel is a bug that was in me when I was born, probably inherited from my father. In 24 years of travelling widely through India, I have been most fascinated by those little islands that dot the Bay of Bengal off the East Coast of India. Yes, I am talking about the Andaman Islands. Andamans somehow seemed almost sinister, with images of being haunted, bleak and scary, until my parents actually returned from a trip to Port Blair and told us about these serene islands. We immediately awaited the first opportunity to take a break and check them out. Finally, the D-Day came and we were all ready. We boarded the aircraft and to our surprise found that there were several empty seats. On enquiry, we learnt that all supplies to the Andamans including newspaper and meat go from the mainland and so there is always more cargo and less people.

Port Blair airport is a small, old airport that was constructed in 1947. On my way to the hotel I noticed that there are none of the usual autorickshaws that noisily wend their way through most Indian towns. There was only one traffic signal in the entire town and the roads were more ups-and-downs than level. This was all surprising for a person like me who has lived in the coastal towns of Chennai and Mumbai. The colour of the sea was an unpolluted blue, a colour that I had not seen in any of the beaches in India. It was calm and beautiful. I was thrilled with the fact that we were going to spend 10 entire days there. All we had to do was sit in the open restaurant, look at the sea, enjoy the cool breeze and feel good.

The Andaman Islands are a group of several islands, so most of our sightseeing was by boats. There are a total of more than 356 islands there. Even the oldest boatman, Rathnarn, had seen only 200 of them. I figured that 10 days was surely not enough to get a full picture of this place, so I started to store every sight, every sound and every smell. The sound and light show at the jail sent a shiver down my spine. (This trip was before the movie 'Kalapani' was released). The realisation that those who fought for our Independence had lived, struggled, suffered and even died here left an impact.

a) On the basis of your reading of the above passage, answer the following (1×6=6) questions by choosing the correct option.

- (i) What kind of a passage is this?
- (a) Fiction
 - (b) Travelogue
 - (c) Persuasive

(d) Biography

(ii) Why was the author interested in taking a trip to Andaman Islands?

- (a) It had a haunted, bleak and scary image.
- (b) As his parents had not recently taken a trip there.
- (c) He loved travelling.
- (d) He was largely fascinated by what his parents told him about the islands.

(iii) Why was the author surprised when he reached Port Blair?

- (a) The airport was very big.
- (b) There was no traffic signal in the entire town.
- (c) Living in a busy city, he had never expected such a town.
- (d) None of the above.

(iv) What is the meaning of the phrase 'sent a shiver down my spine'?

- (a) Feel very frightened
- (b) Feel very excited
- (c) Feel very relaxed
- (d) None of these

(v) The synonyms of 'sinister' in the second paragraph is ...

- (a) threatening
- (b) left side
- (c) benign
- (d) good

(vi) One thing that left a major impact on the author was ...

- (a) the serenity of the place
- (b) the wholesome experience
- (c) vastness of the islands
- (d) the realisation that freedom fighters had lived, struggled and died there

b) On the basis of your reading of the passage, answer the following questions briefly.

- (i) Why were there several empty seats in the aircraft?
- (ii) What was unusual about Port Blair?
- (iii) How did the author describe the beaches?
- (iv) Why was most of their sightseeing by boats?
- (v) The word.....in para 1 means 'provisions'.
- (vi) The word in the passage which is an antonym of 'contaminated' is..... (para 2)

Q2. Read the text carefully and answer the questions: 8M

1. Millions of tons of small waste from plastic bags, bottles and clothes in the world's ocean present a serious threat to human health and marine environment. This is a warning issued by the U.N. in a report on the most dangerous environmental problem facing the world today. Global plastic production has increased considerably in years nearly by 38%.

2. A poor waste management means when we have finished with our takeaways contains cigarette butts and party balloons, they are worn down into trillions of even small particles by the waves. Therefore, there is a growing presence of these micro plastic the world's oceans.

3. It was estimated in 2010 that millions of tons of plastic was washed into the sea since shown up in the stomachs of whales, plankton and other marine life. Richard Thompson, professor of marine biology said that in laboratory experiments the proof that micro plastic can cause harm to organisms.

4. More than a quarter of all fish now contained plastic, according to a recent study which analysed the guts of fish sold in California. Scientists fear that chemicals in plastic and other chemicals which attach themselves to plastic in natural environment could each cause poisoning and many disorders in marine life if consumed in huge quantities.

5. Even humans could be adversely affected by the plastic. People could even be breathing in plastic micro-particles suspended in the air with the risk of harmful effects on the lungs similar to air pollution.

6. Volunteers around the world collect trash and tally up what they find on the beach in Ocean Conservancy's Annual International Coastal Cleanup. The result item-by-item, location-by-location Ocean Trash Index provides the only snapshot of marine debris littering coasts and waterways around the world, according to Ocean Conservancy.

7. Boya Slat, a Dutch student has developed a technology that could sift dangerous plastic particles out of the ocean and sell them for profit or recycling. Richard Thompson recommended that people avoid using products with micro beads and to make sure they dispose of all plastic products in an appropriate way by, if possible.



i. Select the option that is true for the two statements given below.

(1) More than a quarter of all fish now have plastics present in them.

(2) Millions of tons of plastic waste is present in the world's oceans.

1. (1) is the result of (2)

2. (1) is the reason for (2)

3. Both (1) and (2) are true

4. (1) contradicts (2)

ii. According to the passage, Richard Thompson is a _____.

iii. _____ provides the only snapshot of marine debris littering coasts and waterways.

iv. Through what does the cigarette butts and party balloons worn down into smaller particles?

v. We can find out that more than a quarter of all fish contained plastics in them by:

1. the stark warning issued by the UN in a report on the most dangerous environmental problems facing the world today.

2. collecting trash and tallying up what they find each day.

3. laboratory experiments performed by Richard Thompson a profession marine biology.

4. analysing the fish sold in California.

vi. Choose the correct set of statement which is NOT TRUE.

(I) Plastic could have similar effects like car fumes.

(II) Chemicals which attach themselves to plastic in natural environment could cause poisoning in marine life.

(III) Humans will never be adversely affected by the plastic.

(IV) In 2001, Millions of tons of plastic was washed into the sea.

(V) There is a growing presence of micro plastics in the world's oceans.

1. (II), (V)

2. (I), (V)

3. (I), (II)

4. (III), (IV)

vii. What amount of paper bags in the index are diffused into the oceans?

viii. Fill in the blank with with the correct option.

There are _____ beverage cans found in the index.

1. 337,865

2. 339,875

3. 339,445

4. 333,347

Q3. Read the passage carefully. 8M

1. Conversation is indeed the most easily teachable of all arts. All you need to do in order to become a good conversationalist is to find a subject that interests you and your listeners. There are, for example, numberless hobbies to talk about. But the important thing is that you must talk about other fellow's hobby rather than your own. Therein lies the secret of your popularity. Talk to your friends about the things that interest them, and you will get a reputation for good fellowship, charming wit, and a brilliant mind. There is nothing that pleases people so much as your interest in their interest.

2. It is just as important to know what subjects to avoid and what subjects to select for good conversation. If you don't want to be set down as a wet blanket or a bore, be careful to avoid certain unpleasant subjects. Avoid talking about yourself, unless you are asked to do so. People are interested in their own problems not in yours. Sickness or death bores everybody. The only one who willingly listens to such talk is the doctor, but he gets paid for it.

3. To be a good conversationalist you must know not only what to say, but how also to say it. Be mentally quick and witty. But don't hurt others with your wit. Finally try to avoid mannerism in your conversation. Don't bite your lips or click your tongue, or roll your eyes or use your hands excessively as you speak.

4. Don't be like that Frenchman who said, "How can I talk if you hold my hand?"

3.1 Make notes on the contents of above paragraph, using abbreviations. Supply a suitable title also. 5M

3.2 Make a summary of the passage. 3M

SECTION – B GRAMMAR AND CREATIVE WRITING (23 MARKS)

Q.4 Fill in the blanks with correct form of the verb.

1. After Howard _____ his studies he intends to work in his father's company.

(FINISH)

2. I _____ the instructions on the test sheet when the headmaster came in and wished all of us good luck. (READ)

3. By the time I finish my thesis I _____ on it for over three years. (WORK)

4. Ancient Greek athletes received a wreath of olives after they _____ a race. (win)

Q5. Rearrange the following words or phrases to make meaningful sentences: 3M

1. a/ lover/ is/ animal/ passionate/ he

2. campaigned/ birds/ he/ caged/ free/ to

3. to/ her/ first/ Sudha/ stand/ hard/ class/ is/ studying/ in

Q6. You are Ram/Rajani. Draft a classified advertisement, in not more than 50 words, to be published in India Times for the sale of a used motor car giving all the necessary details. You can be contacted at 12345679. 3M

OR

You are Vikram/Sonia, an Honours's graduate in history with specialization in Medieval India. You are well acquainted with places of historical interest in Delhi, Agra and Jaipur. You are looking for the job of tourist guide. Write an advertisement in about 50 words for the situations wanted column of a local newspaper. Your contact no. 999751234.

Q7. Design a poster on the topic "Say No To Plastics." 3M

OR

Design a poster on the topic "Save Water."

Q8. As Mukul / Mahima of Alps Public School, write a speech to be delivered in school assembly highlighting the importance of cleanliness suggesting that the state of cleanliness reflects the character of its citizens. (150-200 words) 5M

OR

You are Ali/Alia, Head girl / Head boy of your school. You are deeply disturbed by the rising cases of aggressive behaviour of students in your school. You decide to speak during the morning assembly about it. Write a speech on 'Indiscipline in Schools'. (150 – 200 words)

Q9. "Academic excellence is the only requirement for a successful career." Write a debate either for or against the motion. (120 – 150 words) 5M

OR

Social media (Facebook, Twitter, etc.) is being used to create disaffection in society.' Write a debate in 120-150 words either for or against the motion. (7marks)

SECTION C LITERATURE (31 MARKS)

Q10. Read the extract given below and answer any two of the questions that follow. 3M

When did my childhood go?

Was it the time I realised that adults were not all they seemed to be,

They talked of love and preached of love,

But did not act so lovingly,

Was that the day!

1. Who is 'my' in the above lines?
2. Why is 'I' confused?
3. Who talk of love and preach of love?

Q11. Read the given passage and answer the questions that follow. (1x3=3M)

He was just a teenager when he died. The last heir of a powerful family that had ruled Egypt and its empire for centuries, he was laid to rest laden with gold and eventually forgotten. Since the discovery of his tomb in 1922, the modern world has speculated about what happened to him, with murder being the most extreme possibility.

1. Who is the author of these lines ?
2. Who is 'he' in these lines ?
3. What has happened to 'he' recently?

Q12. Read the given passage and answer the questions that follow. (1x4 = 4M)

When the curtain rises it is an afternoon in early autumn and the stage can be well lit. Mrs Pearson at right, and Mrs Fitzgerald at left, are sitting opposite each other at the small table, on which are two teacups and saucers and the cards with which Mrs Fitzgerald has been telling Mrs Pearson's fortune. Mrs Pearson is a pleasant but worried-looking woman in her forties. Mrs Fitzgerald is older, heavier and a strong and sinister personality. She is smoking. It is very important that these two should have sharply contrasting voices.

1. What is the name of the play?
2. Where is the scene set ?
3. How are Mrs. Pearson and Mrs. Fitzgerald related?
4. What was the contrast between the voices of the two ladies?

Q13. Answer the following questions in 40-50 words. (ANY TWO) 3x2=6M

1. Mention how the sparrows expressed their sorrow when the author's grandmother died.
2. What was the narrator's experience when she entered the house?
3. Explain the statement, "King Tut is one of the first mummies to be scanned — in death, as in life ..."

Q14. Answer any one of the following questions in 40-50 words. 3x1=3M

1. What was Mr Pearson called behind his back in the club? Why was he called so?
2. What efforts did Andrew make to revive Susan Morgan? (Birth)

Q15. Answer any one of the following question (ANY ONE) in about 100-120 words. (6x1=6M)

How did the narrator and his companions save the boat from sinking?

OR

Write the character sketch of the grandmother.

Q16. Answer any one of the following question (ANY ONE) in about 100-120 words. (6x1=6M)

Compare and contrast the characters of Mrs Fitzgerald and Mrs Pearson. Who do you admire and why? (Mother's Day)

OR

How did the narrator come to know about Mrs Dorling and the address where she lived?

SUBJECT: MATHEMATICS

TIME: 3 Hours

MM: 80

General instructions:

- All questions are compulsory.
- Section A consists of 20 questions of 1 mark each.
- Section B consists of 5 questions of 2 marks each.
- Section C consists of 6 questions of 3 marks each.
- Section D consists of 4 questions of 5 marks each.
- Section E has 3 source based/case based/passage based of assessment of 4 marks each with sub parts.
- Use of calculator is not allowed.

Section A

1. For two sets $A \cup B = A$ iff

- | | |
|---------------------|-----------------------|
| (i) $B \subseteq A$ | (iii) $A \subseteq B$ |
| (ii) $A \neq B$ | (iv) $A = B$ |

2. The number of subsets of a set containing n elements is

- | | |
|------------|----------------|
| (i) n | (iii) 2^n |
| (ii) n^2 | (iv) $2^n - 1$ |

3. The range of the function $f(x) = \frac{x}{|x|}$ is

- | | |
|-------------------------------|--------------------|
| (i) $\mathbb{R} - \{0\}$ | (iii) $\{-1, 1\}$ |
| (ii) $\mathbb{R} - \{-1, 1\}$ | (iv) none of these |

4. Which of the following is incorrect?

- | | |
|----------------------------------|-----------------------------------|
| (i) $\sin \theta = -\frac{1}{5}$ | (iii) $\sec \theta = \frac{1}{2}$ |
| (ii) $\cos \theta = 1$ | (iv) $\tan \theta = 20$. |

5. The value of $\tan \theta \sin\left(\frac{\pi}{2} + \theta\right) \cos\left(\frac{\pi}{2} - \theta\right)$ is

- | | |
|---------|----------------------------------|
| (i) 1 | (iii) $\frac{1}{2} \sin 2\theta$ |
| (ii) -1 | (iv) none of these |

6. The value of $(1 + i)(1 + i^2)(1 + i^3)(1 + i^4)$ is

- | | |
|--------|--------------------|
| (i) 2 | (iii) 1 |
| (ii) 0 | (iv) none of these |

7. If $\frac{3+2i\sin \theta}{1-2i\sin \theta}$ is a real number and $0 < \theta < 2\pi$, then $\theta =$

- | | |
|----------------------|-----------------------|
| (i) $\frac{\pi}{6}$ | (iii) $\frac{\pi}{2}$ |
| (ii) $\frac{\pi}{3}$ | (iv) π |

8. If x is a real number and $|x| < 5$ then

- (i) $x \geq 5$ (iii) $-5 < x < 5$
(ii) $x \leq -5$ (iv) $-5 \leq x \leq 5$
9. The number of words from the letter of the word 'BHARAT' in which B and H will never come together is
(i) 360 (iii) 120
(ii) 240 (iv) none of these
10. In how many ways can a committee of 5 be made out of 6 men and 4 women containing at least one woman?
(i) 246 (iii) 186
(ii) 222 (iv) none of these
11. The term without x in the expansion of $(2x - \frac{1}{2x^2})^{12}$ is
(i) 495 (iii) -7920
(ii) -495 (iv) 7920
12. If 7th and 13th term of an A.P. be 34 and 64 respectively, then its 18th term is
(i) 87 (iii) 89
(ii) 88 (iv) 90
13. If second term of a G.P. is 2 and the sum of its infinite terms is 8, then its first term is
(i) 1/4 (iii) 2
(ii) 1/2 (iv) 4
14. The line segment joining the points (-3, -4) and (1, -2) is divided by y-axis in the ratio
(i) 1:3 (iii) 3:1
(ii) 2:3 (iv) 3:2
15. The angle between the lines $2x - y + 3 = 0$ and $x + 2y + 3 = 0$ is
(i) 90° (iii) 45°
(ii) 60° (iv) 30°
16. The eccentricity of the ellipse $4x^2 + 9y^2 = 36$ is
(i) $\frac{1}{2\sqrt{3}}$ (iii) $\frac{1}{\sqrt{3}}$
(ii) $\frac{\sqrt{5}}{3}$ (iv) $\frac{\sqrt{5}}{6}$
17. $\lim_{x \rightarrow a} \frac{x^n - a^n}{x - a}$ is equal to
(i) na (iii) na^n
(ii) 1 (iv) na^{n-1}
18. The mean deviation of the numbers 3, 4, 5, 6, 7 from the mean is
(i) 25 (iii) 1.2
(ii) 5 (iv) 0
19. Two dice are thrown simultaneously. The probability of obtaining total score of seven is
(i) 5/36 (iii) 8/36
(ii) 6/36 (iv) 7/36
20. A pack of cards contains 4 aces, 4 kings, 4 queens and 4 jacks. Two cards are drawn at random. The probability that at least one of them is an ace is

(i) $1/5$

(iii) $1/9$

(ii) $3/16$

(iv) $9/20$

Section B

21. Find the domain and range of the function $f(x) = \sqrt{9 - x^2}$.

22. What is the number of ways of choosing 4 cards from a pack of 52 playing cards? In how many of these

(i) Four cards of same suit

(ii) Are face cards

Or

A committee of 7 has to be formed from 9 boys and 4 girls. In how many ways can this be done when the committee consists of:

(i) Exactly 3 girls

(ii) Atleast 3 girls

23. Find the distance of the point (3, -5) from the line $3x - 4y - 26 = 0$.

24. Evaluate: $\lim_{x \rightarrow 0} \frac{\sin 4x}{\sin 2x}$.

or

Evaluate: $\lim_{x \rightarrow 2} \frac{3x^2 - x - 10}{x^2 - 4}$.

25. Compute the derivative of $f(x) = \sin^2 x$.

Section C

26. In a survey it was found that 21 people liked product A, 26 liked product B and 29 liked product C. if 14 people liked products A and B, 12 people liked products C and A, 14 people liked product B and C and 8 liked all the three products. Find how many liked product C only.

27. Line through the points (-2, 6) and (4, 8) is perpendicular to the line through the points (8, 12) and (x, 24). Find the value of x.

28. The coefficients of the $(r-1)^{\text{th}}$, r^{th} and $(r+1)^{\text{th}}$ terms in the expansion of $(x+1)^n$ are in the ratio 1:3:5. Find n and r.

Or

Find a if the 17th and 18th terms of the expansion $(2+a)^{50}$ are equal.

29. (i) Find the equation of the parabola which is symmetric about the y-axis and passes through the point (2, -3).

(ii) Find the equation of the ellipse, whose length of major axis is 20 and foci are $(0, \pm 5)$.

30. Show that the points A (1, 2, 3), B (-1, -2, -1), C (2, 3, 2) and D (4, 7, 6) are vertices of a parallelogram ABCD, but it is not a rectangle.

Or

Find the lengths of the medians of the triangle with vertices A (0, 0, 6), B (0, 4, 0) and C (6, 0, 0).

31. (i) A die is rolled. Let E be the event "die shows 4" and F be the event "die shows even number". Are E and F mutually exclusive?

(ii) A coin is tossed. If the outcome is head, a die is thrown. If the die shows up an even number, the dice is thrown again. What is the sample space for the experiment?

Section D

32. Prove that $\cos^2 x + \cos^2 \left(x + \frac{\pi}{3}\right) + \cos^2 \left(x - \frac{\pi}{3}\right) = \frac{3}{2}$.

Or

Prove that $\frac{\cos 4x + \cos 3x + \cos 2x}{\sin 4x + \sin 3x + \sin 2x} = \cot 3x$.

33. Solve the following system of inequality graphically

$$3x + 2y \leq 150$$

$$x + 4y \leq 80$$

$$x \leq 15, y \geq 0$$

34. The pth, qth and rth terms of an A.P are a, b, c respectively. Show that

$$(q - r)a + (r - p)b + (p - q)c = 0$$

Or

Let S be the sum, P be the product and R the sum of reciprocals of n terms in a G.P. prove that $P^2 R^n = S^n$.

35. Find the mean, variance and standard deviation using short cut method

Height	70-75	75-80	80-85	85-90	90-95	95-100	100-105	105-110	110-115
No of children	3	4	7	7	15	9	6	6	3

Or

Calculate mean, variance and standard deviation for the following distribution

Classes	30-40	40-50	50-60	60-70	70-80	80-90	90-100
Frequency	3	7	12	15	8	3	2

SECTION E

36. Case Study I:

In a library, 25 students read physics, chemistry and mathematics books. It was found that 15 students read mathematics, 12 students read physics while 11 students read chemistry. 5 students read both mathematics and chemistry, 9 students read physics and mathematics. 4 students read physics and chemistry and 3 students read all three subject books.

(i). How many number of students who reading only chemistry?

(ii). How many number of students who reading only mathematics?

(iii). How many number of students who reading only one of the subjects?

(iv). How many number of students who reading atleast one of the subject?

37. Case study II:

A state cricket authority has to choose a team of 11 members, to do it so the authority asks 2 coaches of a government academy to select the team members that have experience as well as the best performers in last 15 matches. They can make up a team of 11 cricketers amongst 15 possible candidates. In how many ways can the final eleven be selected from 15 cricket players if:

- (i). There is no restriction?
- (ii). one of them must be included
- (iii). Two of them being leg spinners, one and only one leg spinner must be included?
- (iv). If there are 6 bowlers, 3 wicket-keepers, and 11 batsmen in all. The number of ways in which a team of 4 bowlers, 2 wicket-keepers, and 5 batsmen can be chosen.

38. Case Study III:

In a company, 100 employees offered to do a work. In out of them, 10 employees offered ground floor only, 15 employees offered first floor only, 10 employees offered second floor only, 30 employees offered second floor and ground floor to work, 25 employees offered first and second floor, 15 employees offered ground and first floor, 60 employees offered second floor.

- (i). Find the number of employees who offered all three floors.
- (ii). Find the number of employees who offered ground floor.
- (iii). Find the number of employees who offered first floor.

The number of employees who did not offer any of the above three floors.

SUBJECT: PHYSICS

TIME: 3 HOURS

M. MARKS: 70

GENERAL INSTRUCTIONS:

All the questions are compulsory.

There are 33 questions in the question paper divided into five sections A, B, C, D and E.

Use of calculator is not permitted.

SECTION A

MULTIPLE CHOICE QUESTIONS (1 X 12 = 12 MARKS)

1. The dimensional formula of pressure is:

- (a) $ML^{-1}T^{-2}$ (b) $ML^{-2}T^{-2}$ (c) MLT^{-2} (d) $ML^{-1}T^{-1}$

2. A car moving with 10 m/s accelerates uniformly at 2 m/s^2 . Distance covered in 5 s is:

- (a) 50 m (b) 75 m (c) 100 m (d) 125 m

3. The angle between two perpendicular vectors is:

- (a) 0° (b) 30° (c) 60° (d) 90°

4. The unit of angular momentum is:

- (a) $\text{kg m}^2/\text{s}$ (b) kg m/s (c) N m (d) Joule

5. If mass is doubled and force remains same, acceleration becomes:

- (a) doubled (b) half (c) same (d) four times

6. The SI unit of surface tension is:

- (a) N/m (b) N m (c) J/m (d) Pa

7. Centre of mass of two equal masses separated by distance d lies:

- (a) at one end (b) at midpoint (c) outside system (d) depends on mass

8. Escape velocity from Earth depends on:

- (a) mass only (b) radius only (c) both mass and radius (d) height only

9. The specific heat of monoatomic gas at constant volume is:

- (a) R (b) $3R/2$ (c) $5R/2$ (d) $7R/2$

10. In SHM acceleration is:

- (a) constant (b) zero (c) proportional to displacement (d) proportional to velocity

11. Young's modulus is ratio of:

- (a) stress/strain (b) strain/stress (c) force/area (d) area/force

12. Time period of simple pendulum depends on:

(a) mass (b) length (c) amplitude (d) bob size

ASSERTION REASON QUESTIONS (QUES NO. 13-16)

13. **ASSERTION:** Work done in circular motion is zero.

REASON: Displacement is perpendicular to force.

- (a) Both true and R correct explanation
- (b) Both true but R not correct explanation
- (c) A true R false
- (d) Both false

14. **ASSERTION:** Kinetic energy depends on mass and velocity.

REASON: $KE = \frac{1}{2} mv^2$.

- (a) Both true and R correct explanation
- (b) Both true but R not correct explanation
- (c) A true R false
- (d) Both false

15. **ASSERTION:** Surface tension decreases with temperature.

REASON: Intermolecular forces weaken at higher temperature.

- (a) Both true and R correct explanation
- (b) Both true but R not correct explanation
- (c) A true R false
- (d) Both false

16. **ASSERTION:** In adiabatic process $Q = 0$.

REASON: No heat exchange occurs with surroundings.

- (a) Both true and R correct explanation
- (b) Both true but R not correct explanation
- (c) A true R false
- (d) Both false

SECTION B (TWO MARKS QUESTIONS) 2 X 5 = 10 MARKS

17. Derive expression for acceleration due to gravity at height h above Earth surface.

18. Define coefficient of viscosity and write its dimensional formula.

19. Derive first equation of motion graphically.

OR

Find velocity from displacement equation $x = 5t^2 + 2t$.

20. Compare solid and hollow sphere moments of inertia about diameter.

21. Derive expression for rms velocity of gas molecules.

SECTION C (THREE MARKS QUESTIONS) 3 X 7 = 21 MARKS

22. Derive expression for centripetal force.

23. State and prove work-energy theorem.

24. Define escape velocity and derive its expression.

OR

State Kepler's laws of planetary motion.

25. Explain conduction, convection and radiation with examples.
26. Derive time period of spring-mass system.
27. Write equation of progressive wave and define wavelength and frequency.
28. Derive expression for fundamental frequency of open organ pipe.

SECTION D CASE STUDY BASED QUESTIONS (4 X 2 = 8 MARKS)

29. Case Study: Conservation of Momentum

Answer the following MCQs based on principle of conservation of momentum.

(a) Momentum is conserved when:

(i) external force present (ii) no external force (iii) friction present (iv) gravity acts

(b) Define recoil of gun.

(c) Two bodies collide elastically. What is conserved?

(d) State law of conservation of momentum.

OR

Explain explosion of bomb using conservation of momentum.

30. Case Study: First Law of Thermodynamics

(a) State first law.

(b) Write equation $\Delta Q = ?$

(c) What happens in isothermal process?

(d) Define cyclic process.

OR

Explain adiabatic process.

SECTION E (FIVE MARKS QUESTIONS) 5 X 3 = 15 MARKS

31. Prove conservation of mechanical energy.

OR

Differentiate elastic and inelastic collision.

32. Derive equation of trajectory of projectile.

OR

State and prove parallelogram law of vectors.

33. State and prove Bernoulli's theorem.

OR

Derive expression for excess pressure inside soap bubble.

SUBJECT: BIOLOGY

TIME: 3 Hours

MM: 70

NAME: _____

DATE: _____

General Instructions:

1. All questions are compulsory.
2. The question paper has five sections & 33 questions.
3. Section A has 16 questions of 1 mark each; Section B has 5 questions of 2 marks each; Section C has 7 questions of 3 marks each; Section D has 3 questions of 5 marks each; Section E has 2 case-based questions of 4 mark each.
4. There is no overall choice. However internal choices have been provided in some questions.

SECTION-A

1. Progesterone is secreted by
(a) Corpora allata (b) Corpus albicans (c) Corpus luteum
(d) Corpus callosum
2. Nissl's granules are absent in
(a) Axon (b) Cyton (c) Dendron (d) Schwann cells
3. Immovable joints are also called as
(a) Synovial joints (b) Symphysis (c) Gliding joint (d) Sutures
4. Glomerulus is formed from
(a) efferent arteriole (b) afferent arteriole
(c) peritubular capillary network (d) vasa recta
5. Mitral valve is present between
(a) Right atrium and right ventricle (b) Left atrium and left ventricle
(c) Right and left ventricle (d) left ventricle and aorta
6. Residual volume is
(a) lesser than tidal volume (b) greater than inspiratory volume
(c) greater than vital capacity (d) greater than tidal volume
7. Which hormone is maximum in coconut milk?
(a) Gibberellins (b) Ethylene (c) Cytokinin (d) Auxin
8. The cell organelle involved in the aerobic respiration in plants is
(a) Chloroplast (b) Chromoplast (c) Mitochondria (d) Ribosomes
9. Thylakoids are characteristic features of
(a) Golgi complex (b) Chloroplasts (c) Mitochondria (d) Endoplasmic reticulum
10. Spindle fibre is made up of
(a) Tubulin (b) Humulin (c) Intermediate filament (d) Flagellin
11. Fehling's solution is used for the detection of

- (a) All carbohydrates (b) Glucose (c) Starch (d) Fats
12. Which of the cell organelle lacks membrane?
 (a) Mesosome (b) Mitochondria (c) Ribosome (d) Liposome

Q. no are 13 to 16 are Assertion- Reason based questions. These consist of two statements- Assertion (A) and Reason(R). Answer these questions selecting the appropriate option given below:

- (a) Both A and R are true and R is the correct explanation of A
 (b) Both A and R are true and R is not the correct explanation of A
 (c) A is true but R is false
 (d) A is false but R is true

13. Assertion(A) : All living organisms have definite shape, size and reveal growth and reproduction.

Reason(R) : These characteristics distinguish them from inanimate objects.

14. Assertion(A): Bacteria are microscopic, unicellular eukaryotes.

Reason(R): They lack true nucleus as well as membrane bound cell organelles.

15. Assertion(A): Many visitors to the hills suffer from skin and respiratory allergy problems.

Reason(R): Conifer trees produce a large quantity of wind borne pollen grains.

16. Assertion(A) : Cold- blooded animals do not have fat layer.

Reason(R) : They use their fat in metabolism during hibernation.

Section B:

17. Name the excretory organ present in the following animals:

- (a) Earthworm (b) Prawn (c) Star fish (d) Centipedes.

18. Distinguish between Cranial nerves and Spinal nerves

19. Draw a diagram of sarcomere of skeletal muscle showing different regions.

20. Why SA node is known as pacemaker of heart?

21. What is oxidative phosphorylation?

Section C

22. Describe the following with diagram to illustrate your answer

- (a) Synapsis (b) Bivalent (c) Chiasmata

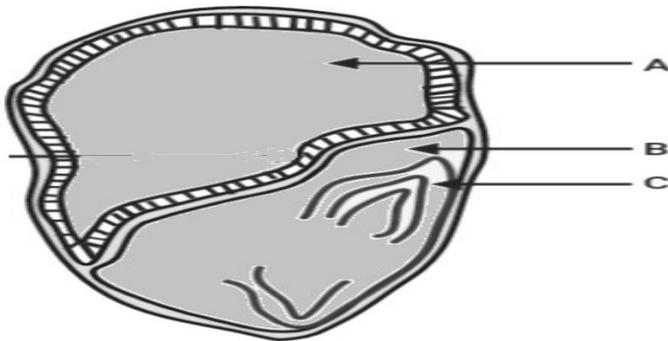
23. What kind of reaction does each of the following groups of enzyme catalyse?

- (a) Dehydrogenase (b) Lyases (c) Transferases.

24. Fill up the blanks space appropriately.

Phylum/ Class	Excretory organ	Circulatory organ	Respiratory organ
Arthropoda	a	b	Lungs/Gills/Tracheal system
c	Nephridia	Closed	Skin/ Parapodia
d	Metanephridia	Open	e
Amphibia	F	Closed	Lung

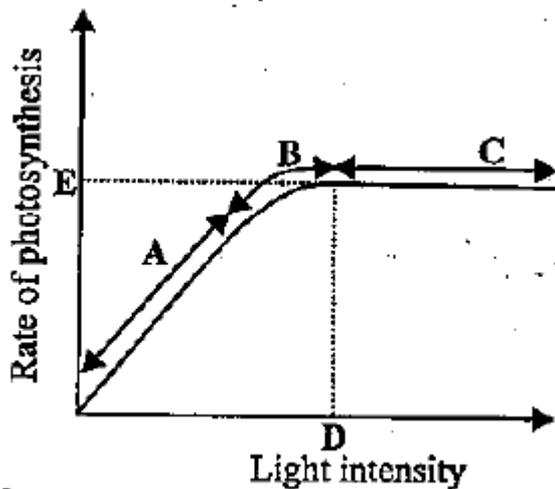
25. Longitudinal section of maize grain is shown in the diagram. Label the parts and also write the functions.



26. Describe the structure of the following with the help of the labelled diagrams:

(a) Nucleus (b) Mitochondria (c) Golgi apparatus

27. Figure shows the effect of light on the rate of photosynthesis. Based on the graph, answer the following questions



- At what points (A, B or C) in the curve is light a limiting factor?
- What could be the limiting factor in the region A?
- What do C and D represent on the curve?

28. How does movement of molecules & gases take place across plasma membrane?

Section D

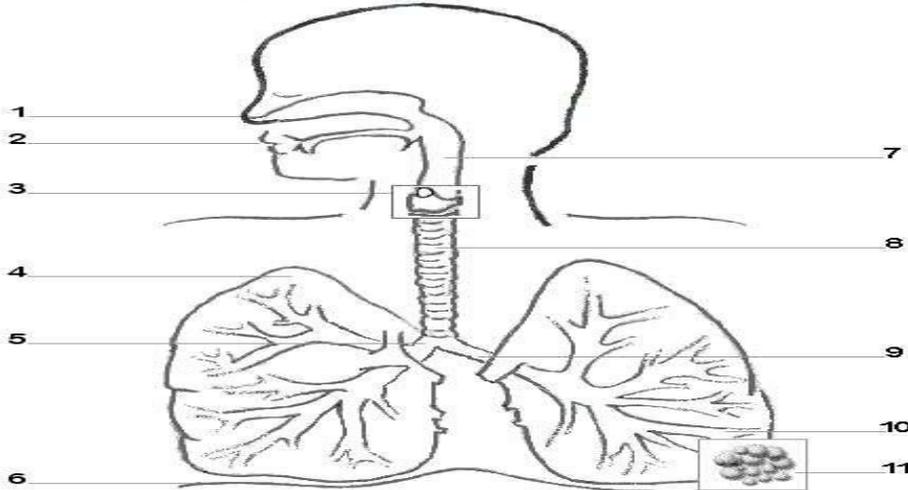
29. What is double blood circulation? Explain it with the help of well labelled diagram of human heart.

OR

Write short notes on the functions of each of the following hormones

- (a) Estrogen (b) insulin (c) Thyroid hormone (d) Testosterone (e) Cortisol

30. (a) Label the parts and write one major function of each.



(b) Define- Tidal volume & Residual volume
OR

Explain the chemiosmotic hypothesis?

31. (a) . Draw a labelled diagram showing the reabsorption and secretion of major substances at different parts of the nephron.

(b) State the differences between the pectoral and pelvic girdle.
OR

(a) What do you mean by double fertilization and triple fusion?

(b) Differentiate between diploblastic and triploblastic animals.

Section E

32. Case Based Question

In human beings, the lungs are situated in the thoracic chamber which is formed dorsally by the vertebral column, ventrally by the sternum, laterally by the ribs, and on the lower side by the dome-shaped diaphragm. The anatomical setup of the lungs in the thorax is such that any change in the volume of the thoracic cavity will be reflected in the lung (pulmonary) cavity. Such an arrangement is essential for breathing. Breathing involves two stages – inspiration and expiration. During inspiration, the atmospheric air is drawn in and during expiration, the alveolar air is released out.

1. On average, a healthy human breathes _____ times/minute.

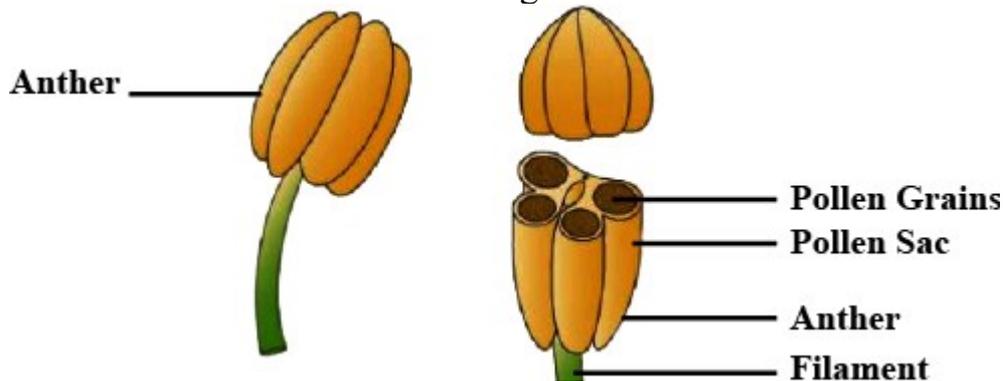
2. Air is sucked into the lungs by _____ .

3. What term is used for the volume of air inspired or expired during normal respiration?

4. The residual volume of air is _____

33. Case based question

The androecium is composed of stamens. Each stamen that represents the male reproductive organ consists of a stalk or a filament and an anther. Each anther is usually bilobed and each lobe has two chambers, the pollen-sacs. Stamens of flowers may be united with other members such as petals or among themselves. The stamens may be epipetalous or epiphyllous. A flower is a modified shoot wherein the shoot apical meristem changes to floral meristem. Internodes do not elongate and the axis gets condensed. The apex produces different kinds of floral appendages laterally at successive nodes instead of leaves. The arrangement of flowers on the floral axis is termed an inflorescence



Observe the figure and mention what is androecium composed of. (1)

The pollen grains are produced in pollen-sacs. What is a sterile stamen called? (1)

Is salvia and mustard show variation in the length of filaments within a flower? (2)

OR

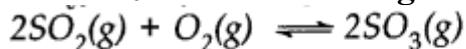
Mention statement justifies that the given figure is racemose inflorescence. (2)



25. Explain the following

- i) Heisenberg's uncertainty principle
- ii) Pauli's exclusion principle

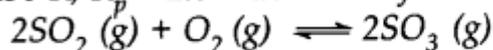
26. What is K_c for the following reaction in state of equilibrium?



Given: $[\text{SO}_2] = 0.6 \text{ M}$; $[\text{O}_2] = 0.82 \text{ M}$; and $[\text{SO}_3] = 1.90 \text{ M}$

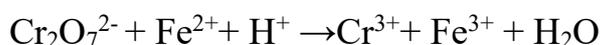
27.

At 450 K, $K_p = 2.0 \times 10^{10} \text{ bar}^{-1}$ for the equilibrium reaction:



What is K_c at this temperature?

28. Balance the following ionic equation:

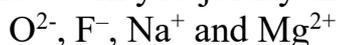


Section-D

29. Read the following passage and answer the following questions:

There are many observable patterns in the physical and chemical properties of elements as we descend in a group or move across a period in the Periodic Table. For example, within a period, chemical reactivity tends to be high in Group 1 metals, lower in elements towards the middle of the table, and increases to a maximum in the Group 17 non-metals. Likewise, within a group of representative metals (say alkali metals) reactivity increases on moving down the group, whereas within a group of non-metals (say halogens), reactivity decreases down the group. There are numerous physical properties of elements such as melting and boiling points, heats of fusion and vaporization, energy of atomization, etc. which show periodic variations.

- (a) What will be trend of metallic character across the period?
- (b) First Ionization enthalpy of Sodium metal is lower than Mg. why?
- (c) How will you justify that all mention elements are isoelectronic species?



OR

Why ionization enthalpy of nitrogen is higher than carbon?

30. Read the following passage and answer the following questions:

AU Measurements for chemical reactions, heat absorbed at constant volume, is measured in a bomb calorimeter. Here, a steel vessel (the bomb) is immersed in a water bath. The whole device is called calorimeter. The steel vessel ' is immersed in water bath to ensure that no heat is lost to the surroundings. A combustible substance is burnt in pure dioxygen supplied in the steel bomb. Heat evolved during the reaction is transferred to the water around the bomb and its temperature is monitored. Since the bomb calorimeter is sealed, its volume does not change i.e., the energy changes associated with reactions are measured at constant volume. Under these conditions, no work is done as the reaction is carried out at constant volume in the bomb calorimeter. Even for

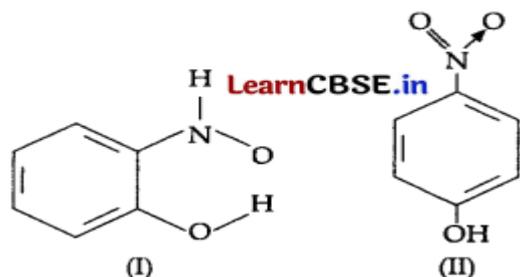
reactions involving gases, there is no work done as $\Delta V = 0$. Temperature change of the calorimeter produced by the completed reaction is then converted to q_V , by using the known heat capacity of the calorimeter with the help of equation.

- Define isothermal process.
- Write a chemical equation in which ΔH and ΔU are equal.
- What is Extensive and intensive property?

Section-E

31. Attempt any five of the following:

(a) Structures of molecules of two compounds are given below:



Which of the above two compounds will show higher boiling point?

- Axial bonds of PCl_5 are longer than equatorial bonds. Why? Give reason.
- Write the resonance structure for CO_2 .
- Draw Lewis structure of H_2SO_4 .
- Difference between sigma and pi bond.
- Define the bond length.
- Explain why BeH_2 molecule has a zero dipole moment although the Be-H bonds are polar?

32. a) Write bond-line formulas for: Isopropyl alcohol, 2,3-Dimethylbutanal, Heptan-4-one.

b) Write the structural formula of 4-chloro-2-pentene.

c) Write all structural isomers of molecular formula C_3H_6O .

OR

- What are the properties of resonance hybrid?
- $(CH_3)_3C^+$ (tert-Butyl carbocation) is more stable than $(CH_3)_2C^+H$ (sec-Propyl carbocation). Why?

33. (a) What are the necessary conditions for any compound to show aromaticity?

(b) Write the resonating structure of CO_3^{2-} ion.

(c) Write the chemical equations of :

(i) Wurtz reaction

(ii) β -elimination reaction

OR

(a) (i) Write the chemical reactions for the Ozonolysis.

(ii) Write IUPAC names of the products obtained the ozonolysis of 3,4-dimethyl hept-3-ene.

(b) (i) Arrange the following in the decreasing order of acidic character.

• C_2H_4 C_2H_6 C_2H_2

• $CH_3 - C = CH$, C_2H_2 $CH_3 - C = C - CH_3$.

(ii) How will you convert: benzene to toluene?

(iii) How many structural isomer are possible for pentane? Draw the geometrical isomers of 2,3-dichlorobut-2-ene.

HISTORY

Time : 3Hrs.

Maximum Marks: 80

General Instructions

1. The question paper comprises **five sections – A, B, C, D and E**. All questions are compulsory.
2. **Section A (Q1–21):** MCQs of 1 mark each.
3. **Section B (Q22–27):** Short Answer Questions – 3 marks each (60–80 words).
4. **Section C (Q28–30):** Long Answer Questions – 8 marks each (300–350 words).
5. **Section D (Q31–33):** Source-based questions – 4 marks each.
6. **Section E (Q34):** Map Work – 5 marks.
7. Attach the map with the answer book.

SECTION A (21 × 1 = 21 Marks)

1. The earliest writing system of Mesopotamia was:
 - A. Hieroglyphics
 - B. Cuneiform
 - C. Pictograph
 - D. Brahmi

2. The ziggurat in Mesopotamia was mainly a:
 - A. Palace
 - B. Temple tower
 - C. Fort
 - D. Market

3. Hammurabi is famous for:
 - A. First democracy
 - B. First law code
 - C. First empire
 - D. First coin

4. The main language of the Roman Empire administration was:
 - A. Greek
 - B. Latin
 - C. Hebrew
 - D. Aramaic

5. Roman roads were important mainly because they:
 - A. Prevented wars
 - B. Promoted trade and military movement
 - C. Helped agriculture
 - D. Stopped invasions

6. The Mongols originally belonged to:

- A. Desert region
- B. Steppe grasslands
- C. River valleys
- D. Forest areas

7. The Mongol army was strongest in:

- A. Naval warfare
- B. Cavalry warfare
- C. Siege defense
- D. Infantry battle

8. A fief in medieval Europe was:

- A. Tax
- B. Land granted by lord
- C. Church law
- D. Trade guild

9. The Black Death was caused by:

- A. Virus
- B. Bacteria spread by fleas
- C. Famine
- D. War

10. Who painted the Mona Lisa?

- A. Michelangelo
- B. Leonardo da Vinci
- C. Raphael
- D. Donatello

11. Humanism emphasized:

- A. Religious obedience
- B. Human potential and reasoning
- C. Feudal loyalty
- D. Military strength

12. The printing press was invented by:

- A. Galileo
- B. Gutenberg
- C. Copernicus
- D. Vesalius

13. Native Americans used maize mainly for:

- A. Trade
- B. Food
- C. Decoration
- D. Weapon

14. The Inca civilization was located in:

- A. Mexico
- B. Peru
- C. Brazil
- D. Canada

15. The Tokugawa period in Japan is known for:

- A. Industrialisation
- B. Isolation policy
- C. Colonisation
- D. Democracy

16. Samurai were:

- A. Merchants
- B. Peasant soldiers
- C. Warrior nobility
- D. Priests

17. The Meiji government sent students abroad mainly to:

- A. Spread religion
- B. Learn Western science & technology
- C. Trade spices
- D. Colonise Asia

18. The Chinese Communist Party was founded in:

- A. 1911
- B. 1921
- C. 1937
- D. 1949

19. The Great Leap Forward aimed at:

- A. Military expansion
- B. Rapid industrialisation
- C. Agricultural decline
- D. Colonial trade

20. Confucianism stressed:

- A. Individual freedom
- B. Social harmony and hierarchy
- C. War
- D. Trade profit

21. The capital of Byzantine Empire was:

- A. Rome
- B. Athens
- C. Constantinople
- D. Venice

SECTION B

(3 × 6 = 18 Marks)

22. Why was writing important in Mesopotamian administration?
23. Explain the role of nomadic pastoralists in Mongol expansion.
24. Describe the role of guilds in medieval European towns.

OR

Explain the importance of monasteries in medieval Europe.

25. What changes did the printing press bring in Europe?
26. Why did Europeans consider native peoples 'uncivilised'?
27. Explain economic reforms introduced in China after 1978.

OR

Write a short note on communes in Maoist China.

SECTION C (8 × 3 = 24 Marks)

28. Explain the main features of urban life in Mesopotamia.

OR

Discuss the role of trade in the Roman Empire.

29. Describe causes and effects of the Black Death in Europe.

OR

Explain the rise of towns and trade in medieval Europe.

30. Analyse Japan's modernization after Meiji Restoration.

OR

Discuss achievements and failures of Mao's policies.

SECTION D – Source Based (4 × 3 = 12 Marks)

Q31. Passage

“If a builder builds a house for a man and does not make its construction firm, and the house collapses and causes the death of the owner, that builder shall be put to death.
If it causes the death of the owner's son, the builder's son shall be put to death.
If it destroys property, he shall restore whatever it destroyed and rebuild the house at his own expense.”

Questions

- 31.1 What type of source is this? (1)
- 31.2 What does it tell about justice? (1)
- 31.3 What does it reveal about society? (2)

Q32. Passage

“God has given man no fixed place in the universe. You may choose for yourself the limits of your nature. You may become what you will — rise to divine heights by your intellect or sink to the level of beasts by ignorance. Therefore man is the creator of his own destiny.”

Questions

- 32.1 What idea about human beings is expressed? (2)
- 32.2 Which movement does it represent? (1)
- 32.3 Why was it revolutionary? (1)

Q33. Passage

“The people, and the people alone, are the motive force in the making of world history. The old system of landlords and exploitation must end. China must stand up and build a society where peasants and workers control their own future and land belongs to those who till it.”

Questions

- 33.1 Who led the revolution? (1)
- 33.2 What was the aim of revolution? (1)
- 33.3 What changes followed? (2)

SECTION E – Map Work (5 Marks)

On the outline map of the world locate:

- a. Ur (Mesopotamia)
- b. Beijing
- c. Kyoto
- d. Florence
- e. Mexico City (Aztec capital)

SUBJECT- ACCOUNTANCY

Time: 3Hrs

MM: 80

GENERAL INSTRUCTIONS:

1. This question paper contains 34 questions. All questions are compulsory.
2. Question 1 to 20 carries 1 mark each.
3. Questions 21 to 26 carries 3 marks each.
4. Questions from 27 to 29 carries 4 marks each
5. Questions from 30 to 34 carries 6 marks each
6. There is no overall choice. However, an internal choice has been provided in 7 questions of **one mark**, 2 questions of **three marks**, 1 question of **four marks** and 2 questions of **six marks**.

1. State whether the statement is True or False: (1)
In Cash Basis of accounting, revenue is recognised as soon as the cash is received.

2. The concept that a business enterprise will not be sold or liquidated in the near future is known as: (1)
- (a) Going concern concept (b) Cost concept
(c) Business Entity concept (d) Accounting Period concept

3. Generally accounts under single entry system are maintained by: (1)
- (a) Sole Trader (b) Company
(c) Society (d) Government
- OR**

- Accounting standards are useful: (1)
- (a) For Investors (b) For Outside Parties
(c) For Auditors (d) For all of the above

4. What is the rule of recording transactions in Nominal Accounts? (1)
- OR**
- ₹ 500 paid to Ghansyam for repairs of machinery will be debited to:
- (a) Repair A/c (b) Wages A/c
(c) Machinery A/c (d) Ghansyam's A/c

5. Trial Balance does not include: (1)
- (a) Capital (b) Closing Stock
(c) Drawings (d) Opening Stock

6. **Assertion (A):** Profits retained in the business for a 'a rainy day' are known as 'General Reserve'.

Reasoning (R): Such reserves cannot be utilized for distribution of dividends among shareholders.

- (a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true.

OR (1)

Under the Companies Act, all companies are required to maintain their accounts according to:

- (a) Cash basis
- (b) Accrual basis
- (c) Either cash or accrual basis
- (d) None of the above

7. Purchase of asset on credit is recorded in: (1)

- (a) Purchase Book
- (b) Purchase Return Book
- (c) Cash Book
- (d) Journal Proper

8. State whether the statement is True or False:

Provision is a charge against profits.

OR (1)

Amount obtained on sale of fixed assets is _____ receipt.

9. Match the following :- (1)

Column A

Column B

- | | |
|---------------------------------|------------------------|
| <p>(i) Furniture</p> | <p>(a) Debit</p> |
| <p>(ii) Salary outstanding</p> | <p>(b) Assets</p> |
| <p>(iii) Expenses or losses</p> | <p>(c) Credit</p> |
| <p>(iv) Incomes or Gains</p> | <p>(d) Liabilities</p> |

10. Personal transactions are distinguished from business transactions in accordance with the concept of _____ . (1)

11. Which accounting principle is certainly followed under single entry as well as double entry system? (1)

12. **Assertion (A):** GST is a value added tax.

Reasoning (R): GST is a value added tax since Input GST is set-off against Output GST. As a result, GST is levied on the incremental value. (1)

- (a) Both A and R are true and R is the correct explanation of A
- (b) Both A and R are true, but R is not the correct explanation of A.
- (c) A is true, but R is false.
- (d) A is false, but R is true

13. Current liabilities are expected to be paid (1)

- (a) Within 3 months
- (b) Within 6 months
- (c) Within 1 year
- (d) Within 2 years

14. State whether the statement is True or False: (1)

GST collected is a liability.

15. Match the following :-

Column A

- (i) Rent Received
- (ii) Prepaid Salary
- (iii) Patents Account
- (iv) Shyam's Account

Column B

- (a) Natural Personal A/c
- (b) Real Account
- (c) Nominal Account
- (d) Representative Personal A/c

OR

(1)

Assertion (A): According to Business Entity concept, business is treated as a unit separate and distinct from its owners.

Reasoning (R): Business Entity concept does not apply to a sole proprietorship firm.

- (a) Both A and R are true and R is the correct explanation of A
- (b) Both A and R are true, but R is not the correct explanation of A.
- (c) A is true, but R is false.
- (d) A is false, but R is true.

16. Pick out a source voucher/ document from the following: (1)

- (a) Debit Voucher
- (b) Credit Voucher
- (c) Invoice
- (d) Transfer Voucher

17. What are accounting standards?

OR

(1)

Trial Balance contains the following information:

15% Bank Loan	₹ 40,000
Interest Paid	₹ 4,500

Interest debited to P & L A/c will be:

- (a) ₹ 6,000
- (b) ₹ 3,000
- (c) ₹ 4,500
- (d) ₹ 1,500

18. Miss Priti, an electronic goods dealer, gifted a washing machine valued ₹ 25,000 to her friend Suruchi. Will it be recorded in the books of accounts? (1)

19. Intangible asset is:

- (a) Cash
- (b) Stock
- (c) Goodwill
- (d) Land

OR

(1)

Depreciation represents a _____ in the value of fixed assets.

20. Paid to Vishakha ₹ 14,000 in full settlement of ₹ 15,000. Posting of ₹ 1,000 will be made to the: (1)

- (a) Dr. side of Discount A/c (b) Cr. side of Discount A/c
(c) Dr. side of Vishakha's A/c (d) Cr. side of Vishakha's A/c

21. (a) Which accounting principle requires that life of a business be broken into smaller parts? Explain that principle.

(b) Which accounting principle requires that personal expenses of proprietor or partners should be debited to drawings account? Explain that principle. (3)

22. Ascertain Cost of Goods Sold and Closing Stock from the following details:

Opening Stock	₹ 5,000
Purchases	₹ 10,000
Direct Expenses	₹ 1,000
Purchase Returns	₹ 900
Gross Profit	₹ 6,000
Sales	₹ 16,000
Sales Returns	₹ 1,000

OR

(3)

Calculate Cost of Goods Sold and Gross Profit from the following:

Net Sales	₹ 9,00,000
Gross Profit	20% on cost

23. Prepare Accounting Equation from the following:

- (a) Started business with Cash ₹ 50,000 and goods ₹ 20,000.
(b) Bought goods for Cash ₹ 15,000 and on Credit for ₹ 10,000.
(c) Goods costing ₹ 24,000 sold at a profit of $33\frac{1}{3}\%$. Half the payment received in cash.

OR

(3)

Surender Mohan started business on 1st April, 2022 with capital of ₹ 7,50,000 and a loan of ₹ 2,00,000 taken from Punjab National Bank. During 2022-23 he had introduced additional capital of ₹ 1,25,000 and had withdrawn ₹ 40,000 for personal use. On 31st March, 2023 his assets were ₹ 15,00,000. Find out his capital as on 31st March, 2023 and profit made or loss incurred during the year 2022-23.

24. Pass the Journal entries to rectify the following errors:

- (i) Cash received from Rajat ₹ 5,000 was posted to the debit of Kamal as ₹ 6,000.
(ii) Goods withdrawn by proprietor for personal use ₹ 1,000 were credited to sales account as ₹ 1,600.
(ii) Depreciation provided on Machinery ₹ 3,000 was posted to Machinery account as ₹ 300.

(3)

25. Accounting provides information about the profitability and financial soundness of a concern. In addition, it provides various other valuable information also. However, accounting has certain limitations. Explain any three of such limitations. (3)

26. Prepare Sale A/c, Kamal's A/c and Suspense A/c with the help of Q.No. 24 (3)

27. On 31st December, 2022, Pass Book shows a debit balance (overdraft) of ₹ 10,000. From the following particulars, prepare a Bank Reconciliation Statement:

- (a) Cheques amounting to ₹ 8,000 drawn on 25th December, of which cheques of ₹ 3,000 were cashed within 31st December.
 - (b) Cheques paid into the bank for collection ₹ 50,000 but cheques of ₹ 22,800 were credited on 2nd January, 2023.
 - (c) Items unticked in the pass book are: -
 - (i) Incidental charges ₹ 25.
 - (ii) Dividend collected by bank on our behalf ₹ 350.
 - (d) A cheque for ₹ 600 debited in the cash book omitted to be banked.
 - (e) A cheque of ₹ 750 banked and credited, but omitted to be recorded in the cash book.
- (4)

28. Enter the following transactions in Purchases Book of M/s.Gurman Brothers, Mumbai: 2023

April 1 Purchased goods from Joshi Bros., Mumbai vide Invoice No.210:
10 Philips Tubelights @ Rs. 200 each
50 Crompton Bulbs @ Rs. 100 each
Trade Discount is 10%

April 6 Purchased against cash 20 Havell's Tubelights @ Rs.180 each less 10% Trade Discount

April 10 Purchased goods from Rajesh Electric Store, Delhi vide Invoice No.18:
25 Heaters @ Rs. 800 each, 10% Trade Discount
15 Crompton Fans @ Rs. 1,600 each, 10% Trade Discount
Paid packing charges Rs. 100

April 15 Purchased a Laptop for Rs. 50,000 from Computer Mart (4)

29. Read the following hypothetical Case Study and journalise the transactions in the books of M/s Designer Wear

Aruna, decided to start business of fashion garments under the name of M/s Designer Wear from 1st April, 2021. She had savings of Rs. 10,00,000. She invested Rs. 3,00,000 out of her savings and also borrowed Rs. 3,00,000 from State Bank of India. She purchased a commercial space of 500 sq. feet for Rs. 5,00,000. The space so purchased was suitably renovated to make it ready as showroom. She purchased furniture and fixtures for Rs. 75,000.

All payments were to be made by cheque. All the receipts were in cash and to be deposited in the bank in the morning of next day. Charge depreciation @ 5% on building and 10% on furniture and fixtures.

OR

(4)

The Capital of Sh. Madhusudan on 1st April, 2022 was ₹ 5,00,000 and on 31st March, 2023 was ₹ 4,80,000. He has informed you that he withdrew from the business ₹ 8,000 per month for his private use. He paid ₹ 20,000 for his income-tax and the instalment of the loan of his personal house at the rate of ₹ 15,000 per month from the business. He had also sold his shares of Reliance Company costing ₹ 1,00,000 at a profit of 20% and invested half of this amount in the business. Calculate the profit or loss of the business.

30. a) State to which class of accounts does each of the following relate:

- | | |
|-------------------------|-------------------------|
| i) Land | ii) Fire Insurance |
| iii) Outstanding Salary | iv) Commission Received |
| v) Goodwill | vi) Creditors |

b) Journalise the following transactions: -

- i. Received ₹ 20,000 from Subhash, which were written off as bad-debts in the previous year.
- ii. Provide 12% interest on capital amounting to ₹ 10,00,000.
- iii. Salaries due to clerks ₹ 50,000. (6)

31. Prepare two column Cash Book having Cash and Bank column from the following transactions and balance the book on 31st Jan., 2020:

- 2020
- | | |
|---------|--|
| Jan. 1 | Cash in hand Rs. 50,000; Bank Overdraft Rs. 1,90,000 |
| Jan. 2 | Purchased goods from Rajesh Kumar of the list price of Rs. 50,000 at 5% trade discount and payment made by cheque. |
| Jan. 6 | Goods sold for Rs. 80,000 and payment received by cheque. Cheque deposited into bank on same day. |
| Jan. 10 | Goods purchased for cash Rs. 19,800 |
| Jan. 15 | Furniture sold for Rs. 1,77,000 and payment received by cheque & cheque deposited into bank on same day. |
| Jan. 18 | Salaries paid Rs. 4,500 |
| Jan. 21 | Settled the amount due to Ram Rs. 2,000 by paying cash Rs. 1,910 |
| Jan. 22 | Cash received from Jai Rs. 14,780 in full settlement of his account of Rs. 15,000 |
| Jan. 23 | Paid life Insurance premium Rs. 1,500 |
| Jan. 31 | Deposited with Bank the entire balance after retaining Rs. 7,000 cash in hand. |

(6)

32. The following are the balances extracted from the books of Mr. Arun. Prepare a trial Balance as on 31st March, 2019: (6)

	₹		₹
Opening Stock	1,02,600	Debtors	45,000
Returns Outward	48,000	Carriage Outwards	15,000
Salaries	36,000	Capital	1,65,600
Creditors	84,000	Machinery	54,000
Bank	1,35,000	Returns Inward	9,000
Carriage Inwards	18,000	Insurance Claim Received	12,000
Rent Received	9,000	Trade Expenses	
Discount Allowed	6,000	Sales	18,000
Purchases	3,00,000	Building	4,20,000
Bills Payable	60,000		60,000

33. The following balances appear in the books of X Ltd. as on 1st April 2019:

	₹
Machinery Account	5,00,000
Provision for Depreciation Account	2,25,000

The machinery was depreciated at 10% p.a. on the Fixed Instalment Method ---the accounting year being April-March.

On 1st October 2019, a machinery which was purchased on 1st July 2016 for ₹ 1,00,000 was sold for ₹ 42,000 and on the same date a fresh machinery was purchased for ₹ 2,00,000.

Prepare the Machinery Account and Provision for Depreciation Account for the year 2019-20.

OR

(6)

X Ltd. purchased a plant on 1st July, 2020 costing ₹ 5,00,000. It purchased another plant on 1st September, 2020 costing ₹ 3,00,000. On 31st December, 2022, the plant purchased on 1st July, 2020 got out of order and was sold for ₹ 2,15,000. Another plant was purchased to replace the same for ₹ 6,00,000. Depreciation is to be provided at 20% p.a. according to Written Down Value Method. The accounts are closed every year on 31st March.

Show the Plant Account and Provision for Depreciation Account.

34. The undermentioned Trial Balance was extracted from the books of M/s Mahavir & Sons as at 31st March, 2023:

Particular	Dr. ₹	Cr. ₹
Capital A/c		3,50,000
Drawings A/c		
Goodwill	48,000	
Plant & Machinery	15,000	
Purchases	2,50,110	
Sales	95,000	3,00,000
Sundry Debtors	54,200	
Creditors		16,800
Return Inwards	20,700	
Purchase Returns		1,200
Advertising	6,000	
Opening Stock	45,400	
Cash in Hand	22,900	
Wages	25,000	
Telephone charges	3,000	
Salaries	36,000	
Printing and Stationery	390	
Sundry Income		7,500
Rent	2,200	
Investment	30,000	
General Expenses	22,600	
Bills Payable		1,000
	6,76,500	6,76,500

You are required to prepare Final Accounts after taking into account the following adjustments: -

- Closing Stock on 31st March, 2023 was valued at ₹ 70,300.
- Write off 1/5th of Advertising expenses.
- Sundry debtors include an item of ₹ 2,000 due from a customer who has become insolvent and nothing is recoverable from his estate.
- Create a provision for Doubtful Debts @ 5%.
- Interest on investments at 15% is receivable for the full year.
- Annual payments are: Salaries ₹ 43,200 and Rent ₹ 2,400.

OR

(6)

The following Trial Balance was extracted from the books of Mr. Gupta as at 31st March, 2023 :

Dr. Balances	₹	Cr. Balances	₹
Stock on 1-4-2022	65,000	Capital	2,50,000
Purchases	7,10,000	Rent Received	3,900
Wages	22,000	Loan from Mr. Yadav @ 15% p.a.	20,000
Trade Expenses	5,000	Sales	9,50,000
Freight and Dock Charges	8,000	Discount	600
Travelling Expenses	3,800	Outstanding Wages	2,000
Lighting and Heating (Factory)	7,200	Trade Expenses accrued but not paid	500
Stores Consumed	2,000	Sundry Creditors	80,000
Rent Paid	16,500		
Establishment Charges	18,000		
Interest on Mr. Yadav's Loan	1,500		
Sundry Debtors	1,42,000		
Cash	6,000		
Fixed Assets	3,00,000		

Adjustments: -

- i. Goods costing ₹ 20,000 were purchased and included into stock but no entry was passed to record the purchase.
- ii. Loan for Mr. Yadav was taken on 1st June, 2022.
- iii. Sundry Debtors include an amount of ₹ 2,000 due from a customer who has become insolvent and nothing is recoverable from his estate.
- iv. Create a provision of 5% for Doubtful Debts and 2% for discount on Debtors.
- v. Three months lighting and heating bill due but not paid ₹ 3,000
- vi. Rent is paid for 11 months but is received for 13 months.
- vii. Stock amounted to ₹ 90,000 on 31st March, 2023.

Prepare Trading and Profit & Loss Account for the year ended 31st March, 2023 and a Balance Sheet as at that date.

SUBJECT : BUSINESS STUDIES (054)

Time: 3 hours

M.M. : 80

- 1. This question paper contains 34 questions.**
- 2. Marks are indicated against each question.**
- 3. Answers should be brief and to the point.**
- 4. Answers to the questions carrying 3 marks may be from 50 to 75 words.**
- 5. Answers to the questions carrying 4 marks may be about 150 words.**
- 6. Answers to the questions carrying 6 marks may be about 200 words.**
- 7. Attempt all parts of the questions together.**

Q1. Which of the following issues certificate of origin?

- (a) Import Export Council (b) Prime Minister
(c) Chamber of Commerce (d) President of India (1)

Q2. Profits do not have to be shared. This statement refers to

- (a) Partnership (b) Joint Hindu family business
(c) Sole Proprietorship (d) Company (1)

Q3. Who issues the Certificate of Incorporation?

- (a) Auditor (b) Registrar
(c) Director (d) Banker (1)

Q4. Mr. Zed, a 39 year old, young man came to know that he is suffering from heart blockages, which need to be operated within next three months. He purchased an insurance policy worth rupees 10 lacs, without disclosing his true clinical material facts. He got operated but insurance company refused to pay the dues stating. Which principle of insurance he has violated?

- (1)
(a) Subrogation (b) Mitigation
(c) Insurable Interest (d) Utmost good faith

Q5. This particular type of Bank account is a combination of savings bank and current account with term or special term deposits accounts. (1)

- (a) Multiple Option Deposit Account (b) Fixed Deposit Account
(c) Recurring Account (d) Saving Account

Q6. Match the columns and choose the correct alternatives: (1)

Column 1	Column 2
A. B2B Commerce	i. A firm's internal processes.
B. B2C Commerce	ii. Transactions taking place between business firms.
C. Intra B Commerce	iii. The business originates from the consumer and ultimate destination is

	also consumer.
D.C2C Commerce	iv. Transactions taking place between business and customers.

- (a) A-iv, B-ii, C-i, D-iii
(c) A-ii, B-iv, C-i, D-iii

- (b) A-iii, B-ii, C-i, D-iv
(d) A-i, B-ii, C-iii, D-iv

Q7. Read the statement carefully and choose the correct alternative:

Statement I: e-commerce is a wider term as compared to e-business.

Statement II: B2C process enables the business to remain in touch with its customers on round-the-clock basis. (1)

- (a) Both the statements are true. (b) Statement I is true, Statement II is false. (c) Both the statements are false. (d) Statement II is true, Statement I is false.

Q8. Which of the following is a borrowed fund for company? (1)

- (a) Preference shares (b) Debentures
(c) Equity shares (d) Retained earnings

Q9. Everyday an ice-cream vendor appears in front of your school. Name the type of retailer referred here. (1)

- (a) Peddlers and Hawkers (b) Market Traders
(c) Street Traders (d) Single line Stores

Q10. **Assertion (A):** Equity share capital act as a temporary source of capital for the business.

Reason (R): Equity capital is to be repaid at the time of liquidation of a company. (1)

- (a) Both A & R are true, But R is not the correct explanation of A.
(b) A is true, But R is false.
(c) A is false, But R is true.
(d) Both A & R are true and R is the correct explanation of A.

Q11. Rahi Ltd. is a company dealing in organic products. The company requires funds, for short term, in order to meet the additional demand during festival season. The financial manager of the company suggested that the company can borrow funds from Rare Limited. Rare Limited deals in FMCG products. Identify the suitable source for raising funds to be used by financial manager in the above case. (1)

- (a) Inter corporate deposits (b) Trade Credit
(c) Cash Credit (d) Bank Overdraft

Q12. To process imported Raw materials, which institute help SSI: (1)

- (a) NSIC (b) DIC
(c) Both (d) None of the above

Q13. Mohan Invested ₹ 50,00,000 in the debentures of Venus ltd. The return for his investment is called _____ (1)

- a) Profit b) Dividend
c) Interest d) Shares

Q14. Jasbir is running an artificial jewelry business on the basis of advertisement only. She has not opened any shop and delivers goods to her customers through courier. Identify the type of Retail Trade that Jasbir is running. (1)

- a) Export Trade
- b) Chain Stores
- c) Mail order houses
- d) Single line stores

Q15. It is a guarantee issued by the importer's Bank that it will honour payment up to a certain amount of export bills to the bank of the exporter. Identify the document. (1)

- (a) Letter of Indemnity
- (b) Indent or Order
- (c) Letter of Credit
- (d) Bill of Exchange

Q16. Which of the following document is not required for obtaining export license? (1)

- (a) IEC Number
- (b) Letter of Credit
- (c) Registration cum membership certificate
- (d) Sight Draft

Q17. GST is the single comprehensive _____ tax on supply of goods and services. (1)

- (a) Direct
- (b) Indirect
- (c) Personal
- (d) Impersonal

Q18. Which of the following is capable of doing maximum good to society? (1)

- (a) Business success
- (b) Laws and regulations
- (c) Ethics
- (d) Professional management

Q19. MSMED Act came into existence in (1)

- (a) October 2007
- (b) October 2006
- (c) October 1991
- (d) October 2013

Q20. 'METRO' is which form of enterprise? (1)

- (a) Public Ltd. Company
- (b) Private Ltd. Company
- (c) Government Company
- (d) PPP

Q21. Mohan, after completing his MBA from a reputed college returned to India. He hired a cab (taxi) from the airport to his house at a fare of ₹ 3000 as no cab was ready to go on meter. In midway he got an idea to start a kind of cab facility in which all the cabs of his business will run on meter along with the total amount of fare will be known to the passenger before boarding his company's cab. He analyzed the idea with its operational viability, also was able to arrange funds required to start the business as idea seems to be profitable. Hence, Mohan decided to start a company with a name of "Cab Convenience".

In above Para Mohan has performed the few steps of one of the stage of formation of company, Explain the next three steps to be performed by Mohan to complete this stage of formation. (3)

Q22. Explain any three functions of commercial banks.

OR

(3)

Explain any three types of digital modes of payment.

Q23. Life insurance corporation of India is the largest insurance company in India. It is headquartered in Mumbai. It was founded in the year 1956, where the parliament of India passed the life insurance of India act that nationalized the private insurance industry in India. Over 245 insurance companies and provident societies were merged to create the state owned life insurance corporation.

(a) Life insurance corporation is classified as which form of public sector enterprise.

(b) State any two features that highlights Life Insurance corporation of India in a particular form of public sector enterprise as identified in part (a).

OR

(3)

With Exponential growth seen in domestic transportation additional metro rail infrastructure, government has decided to offer more metro networks to private parties for operations and management. In Delhi, as 30 metro stations needed to be revived and upgraded in coming years to support the double digit growth in the sector. This would require huge private investment as public funds are limited for infrastructure development. In February 2017, Central government announced that metro rail infrastructure will be built by state owned enterprises (Local and International) in Delhi, Mumbai, Bangalore and Hyderabad to private developers. Identify the type of enterprise discussed in above Para. Also State its two features.

Q24. Following is the capital structure of the ABZ Ltd, composed with different sources of finance.

8% Debentures	₹ 50,000
10% preference share capital	₹ 1,00,000
Equity share capital	₹ 1,00,000

Profits of the company for the year 2017-18 are ₹50,000.

(a) From the above sources of finance, Identify the source of finance that provides tax benefits to the organization.

(b) State any two preferential rights available to preference shareholders over equity shareholders.

(3)

Q25. State any four objectives of Startup India Scheme.

(4)

Q26. “Fundamental reason behind international business is that every country can’t produce equally well or cheaply all that they need, hence international business is required”. Explain any four rationale of the same.

OR

(4)

“International Trade is not only beneficial to Countries but it also works for the well-being of industry and trade of these countries” Explain the rationale of the same.

Q27. Harsh runs an online store dealing in all kinds of household items which he procures from different dealers. Whereas his friend Lakshay runs a store through which he sells all kinds of organic products like spices, pickles, jams etc. These products are produced in his automated manufacturing unit in Kerala.

(a) Identify the two concepts undertaken by Harsh and Lakshay respectively.

(b) Also differentiate between the concepts identified in part (a) on the basis of: Personal touch, risk involved and human resource required.

(4)

Q28. Explain any four arguments for social responsibility.

OR

(4)

Explain any four elements of business ethics.

Q29. Mohit and Sumit are friends. They have to attend the birthday party of a common friend. Mohit goes to 'Poshak kids wear' exclusively for kids wear with his parents to get a new dress for party, whereas Sumit purchased his dress from 'Reliance Mart' & his mother purchased grocery from the same store.

(a) Identify the type of stores Mohit and Sumit visited.

(b) Explain any one feature of each store identified in part (a).

(4)

Q30. Amar, Akbar and Anthony are three friends pursuing different careers.

(a) Amar is a doctor and is running his own clinic.

(b) Akbar runs a bakery and makes breads and biscuits, whereas

(c) Anthony is an IAS officer.

You are required to:

(i) Identify their occupations and

(ii) Differentiate between them on the basis of transfer of interest, reward and code of conduct.

(4)

Q31. A, B, C and D are partners in a firm with unlimited liability. But after 1991, B and C decided that they didn't want to bear unlimited risk. With the consent of all the partners, they made amendments in partnership deed and changed their liability clause, in which now the members are responsible for the losses only to the extent of the capital invested by them.

(a) Identify the types of partnership formed before and after 1991

(b) State any two differences between the types of partnership identified in part (a)

(c) Also explain any three advantages of partnership form of business organization.

(6)

OR

Private sector comprises various types of business organizations. However there is such form of business organization which restricts the rights of transfer of ownership in one of its types, on the other hand the other type of same business organization, allow its owners to transfer their rights of ownership.

(a) Identify the types of one of the form of business organization highlighted in above para.

(b) State any five differences between the types identified in part (a).

Q32. Excel Ltd. has received an order to export 2000 sewing machines to Swift Import Ltd. of Spain. Explain in brief first six steps which Excel Ltd. would need to go through for executing the export order.

(6)

Q33. Deepak Beverages Ltd. is planning to expand its operations. Therefore the board of directors planned to issue shares worth ₹10,00,000. But it is facing some short term financial difficulty, therefore doesn't have sufficient funds to meet its cost of issue of shares. The company invited deposits from the general public for 6 months @ 15% p.a. rate of interest, issued a deposit receipt as an acknowledgement by the company. In this way company was able to meet its short term financial need.

(a) Identify and specify the type of fund which Deepak Beverages Ltd. raised in above .

(b) Also state any three merits and two demerits of the specified fund identified in part (a).

(6)

Q34. Umesh established 'Niger' in 2021 in USA. The powers, rules and regulations of 'Niger' was decided as per USA norms. Niger established its trade projects in different parts of the world to increase its market territory which leads to greater revenue and higher efficiency.

(a) How will 'Niger' be categorised as a private sector enterprise?

(b) State any five features of this private sector enterprise.

OR

(6)

BHEL was founded in the year 1964 by the Government of India. It is the largest power plant equipment manufacturer in the country with 74% market share in the Power Sector. It has network of 17 manufacturing units, 2 repair units, 4 regional offices, 8 service centres and infrastructure allowing it to execute more than 150 projects at sites across India and abroad. It has been granted the prestigious Maharatna status in 2013 by the Government of India. Maharatna Status allows the Board of this company enhanced financial and operational autonomy. In content of the above case:

(a) How will BHEL be classified as a form of Public Sector Enterprise?

(b) State any four features of the form of Public Sector Enterprises as identified in part (a).

(c) State briefly 'Administrative autonomy' as a merit of the type of Public Sector Enterprises as identified in part (a).

SAMPLE PAPER (ANNUAL EXAMINATION)
CLASS- XI
SUBJECT- COMPUTER SCIENCE (083)

Time: 3 Hours

MM: 70

NAME: _____

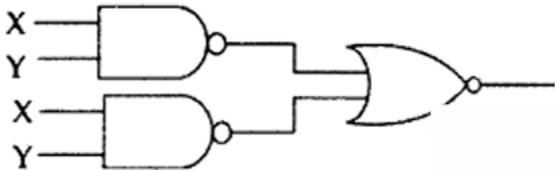
ROLL NO: _____

General Instructions:

- This question paper contains 40 questions.
- All questions are compulsory. However, internal choices have been provided in some questions. Attempt only one of the choices in such questions
- The paper is divided into 4 Sections- A, B, C and D.
- Section A consists of 21 questions (1 to 21). Each question carries 1 Mark.
- Section B consists of 9 questions (22 to 30). Each question carries 2 Marks.
- Section C consists of 9 questions (31 to 39). Each question carries 3 Marks.
- Section D consists of 1 question (40). Question carries 4 Marks.
- All programming questions are to be answered using Python Language only.
- In case of MCQ, text of the correct answer should also be written.

Q.No	<u>-A : 1 Mark Questions</u>	Marks
1	Evaluate the following expression in Python: <code>print(17//2 * 3 + 10.0)</code> a. 34.5 b. 34.0 c. 25.0 d. 34	1
2	Which of the following is an invalid datatype in Python? a. set b. None c. int d. Real	1
3	What will be the output of the following code: <code>NumLst = [2,5,1,7]</code> <code>print(NumLst * 2)</code> a. <code>[2,5,1,7,2,5,1,7]</code> b. <code>[2,5,1,7][2,5,17]</code> c. <code>[4,10,2,14]</code> d. Error	1
4	What will be the output of the following code: <code>NumLst = [2,5,1,7]</code> <code>print(NumLst * 2)</code> a. <code>[2,5,1,7,2,5,1,7]</code> b. <code>[2,5,1,7][2,5,17]</code> c. <code>[4,10,2,14]</code> d. Error	1
5	Consider the given expression: <code>False or not False and True</code> Which of the following will be the correct output if the given expression is evaluated? a. None b. 1 c. false d. True	1
6	Which of the following is a function of the math Module? a. <code>random()</code> b. <code>mean()</code> c. <code>floor()</code> d. <code>median()</code>	1

7	_____ is a software with source code that anyone can inspect, modify, and enhance. a. Operating system b. Utility software c. Compiler d. Open Source	1
8	Find out the type of error in the following code: a=b+20 a=b*b print(a,b) (a) Value error (b) Name error (c) Type error (d) none of above	1
9	The operator 'and' is a _____ operator in Python? a. Logical b. Relational c. Arithmetic d. Augmented	1
10	Which of the following Python mode allows you to write Python program with multiple lines? (a) Interactive Mode (b) Script Mode (c) Client Mode (d) Debug Mode	1
11	. Which of these is not a core data type? (A) List (B) Tuple (C) Dictionary (D) Class	1
12	_____ is a software with source code that anyone can inspect, modify, and enhance. a. Operating system b. Utility software c. Compiler d. OpenSource	1
13	A. Both A and R are true, and R is the correct explanation of A. B. Both A and R are true, but R is not the correct explanation of A. C. A is true, but R is false. D. A is false, but R is true. Assertion (A): Viruses are malicious programs. Reasoning (R): Malicious programs are specifically designed to delete, block, modify or copy data in order to disrupt the performance of computers	1
14	Assertion (A): Items in dictionaries are unordered. Reason (R): We may not get back the data in which order we had entered the data initially.	1
15	Assertion (A): Permission given to use a product by the copyright holder is License. Reason (R): One should not use the copyrighted product without taking license	1
16	Assertion (A): Python comes with its own IDLE. Reasoning (R): IDLE is Python's Integrated Development and Learning Environment which allows programmers to easily write, modify and execute Python programs	1
17	What is printed by the Python code? print(list(range(3))) a)[0, 1, 2, 3] b)[1, 2, 3] c)[0, 1, 2] d)0, 1, 2	1
18	Which of the following is a standard Python library function and not an exclusively list function?	1

	a)append() b)remove() c)pop() d)len()	
19	You don't have to pay for Python and you can view its source code too. It means Python is- a)Freeware b)Free and Open source c)Open source d)Shareware	1
20 is capable of recognizing a pre-specified type of mark made with dark pencil or ink. a)OCR b)OMR c)MICR d)Barcode Reader	1
21	Assertion (A): The number of symbols (digit and alphabet) used in a number system is called its radix/base. Reasoning (R): Base value of a number system is used to distinguish a number in one number system from another number system.	1
Q.No	<u>-B : 2 Mark Questions</u>	Mark s
22	Draw a logic circuit for the following Boolean expression: $AB + CD'$ [2] OR  Write the equivalent boolean expression for the following logic circuit.	2
23	How many types of strings are supported in Python?	2
24	Draw a logic circuit equivalent for the following Boolean Expression: $A' + B' + C'$ OR Draw a logic circuit equivalent for the following Boolean Expression: $(A'.B') + C'$	2
25	Draw Truth Table of given Boolean Expression $X.(Y+Z) = X.Y + X.Z$	2
26	Write the output of the Python code given below: <code>D=('SUN','MON','TUE','WED','THU','FRI','SAT')</code> <code>L=D[1:len(D)-1] print('#'.join(L))</code> OR Write the output of the Python code given below: <code>D={'Grapes':50,'Mango':70,'Banana':20} print(sorted(D))</code>	2
27	Differentiate between copyrights and trademarks.	2
28	Define plagiarism and why it is a punishable offense?	2
29	Write the results of the following: a. <code>print(6 * 15 - 2 // 7 - 2 * 3)</code> b. <code>print(12 * 3 + 43 - 2 + 5 % 2)</code>	2
30	Draw the logic circuit for the following equation: $A'B' + (AB)'$ OR	2

	Draw the logic symbol of any two basic gates.	
Q.No	<u>-C : 3 Mark Questions</u>	Mark s
31	Write the output of the following: <pre>s = "Strings in Python" print(s.capitalize()) print(s.title()) s6 = s.replace("in", "data type") print(s6)</pre>	3
32	Proof the Demorgan's Laws with the help of truth tables. OR Explain Universal gates with the help of truth tables.	3
33	What is Data Protection? Give any two ways to protect your data online. OR Define the following terms : a) Ransomware b) Cyber Crime	3
34	Differentiate between split() and partition() in Python. Give suitable examples of each.	3
35	Write a Python code to accept a number and display its factors. The process should continue till the user wants. For Example Enter N: 10 Factors: 1,2,5,10	3
36	Give any three basic rules of netiquette to avoid damaging your online as well as offline relationships.	3
37	Draw a Logic Diagram of given Boolean Expression $F(X,Y,Z) = ((X'+Y).(X+Y'+Z))'$	3
38	Write single line Python commands to perform each of the following operations: QUOTE="Life is beautiful" <ul style="list-style-type: none"> ● Display the length of the string QUOTE. ● Display the reverse of the string QUOTE. ● Display the count of 'i' from the string QUOTE ● Display the substring 'beauti' from the string QUOTE. 	3
39	Convert the following from one number system to another (show the complete working): a. $(512)_{10} = ()_2$ b. $(10010111)_2 = ()_{10}$ c. $(451)_8 = ()_{16}$	3
Q.No	<u>A : 4 Mark Questions</u>	Marks
40	Python code to accept values of X as float and N as int, find and display the sum of following series: (a) $1 + 4 + 7 + \dots$ upto N (b) $1/X_1 + 1/X_2 + 1/X_3 \dots$ upto Nth Terms	4

- Q10. When both demand and supply curves shift rightwards in same proportion 1
 a) equilibrium price remains unchanged
 b) equilibrium quantity remains unchanged
 c) equilibrium price remains unchanged but equilibrium quantity decreases
 d) equilibrium price remains unchanged but equilibrium quantity increases

- Q11. Distinguish between positive economics and normative economics. 3
 OR
 Distinguish between micro economics and macro economics.

- Q12. State the relationship between marginal cost and average cost. 3

- Q13. When the price is ₹ 5 per unit a consumer buys 40 units of a commodity and his price elasticity of demand is (-) 1.5. How much will he buy if the price is reduced to ₹4 per unit?
 4

- OR
 Distinguish between change in demand and change in quantity demanded.

- Q14. Complete the given table. 4

Output (Units)	Total Variable Cost(₹)	Average Variable Cost (₹)	Marginal Cost(₹)
1	20	—	—
—	—	16	12
3	54	—	—
—	—	20	26

- Q15. Define market supply. Explain the effect of rise in input price on the supply of a good. 4

- Q16. Explain the conditions of consumer's equilibrium under indifference curve approach. 6

- Q17. Distinguish between 'price ceiling' and 'price floor'. Explain implications of price ceiling. 6
 OR

How will a change in the price of Tea? Explain the effect on equilibrium quantity also through a diagram.

SECTION B – STATISTICS

- Q17. What are the sources of data? 1

- Q18. In random Sampling 1

- (a) Each element has equal chance of being selected
 (b) Each element has unequal chance of being rejected.
 (c) Each element has equal chance of being rejected.
 (d) Both (a) and (c)

- Q19. Sampling method is comparatively less expensive. (True/False) 1

- Q20. In case of _____ ogive the cumulative total tends to decrease. (less than/more than) 1

- Q21. Find the correct option from the following. 1

- (a) Mode = 3 median – 2 mean
 (b) Mode = 2 median – 3 mean
 (c) median = 3 mode – 2 mean
 (d) Mean = 3 median – 2 mode

- Q22. Which measure of central tendency cannot be calculated by graphic method: 1

- (a) Mode (b) Median
 (c) Mean (d) None of these

Q23. What is the graphical measure available to measure of dispersion? 1
 (a) Frequency polygon (b) Histogram
 (c) Ogive curve (d) Lorenz curve

Q24. Variance is the square of _____. (Mean Deriation/ Standard deriation) 1

Q25. In India inflation is measured on the basis of wholesale price index. 1
 (True/False)

Q26. Maximum value of coefficient of correlation is 1
 (a) 0 (b) -1
 (c) +1 (d) μ

Q27. What are the main methods of collecting primary data? 3

Q28. Write three demerits of median. 3

Q29. Calculate mean by direct method from the following data: 4

C.I.	5-15	15-25	25-35	35-45	45-55	55-65
Frequency	15	19	13	21	14	10

Q30. Calculate mode from the following distribution. 4

Class	20-40	40-80	80-100	100-120	120-140
Frequency	3	6	20	12	9

Q31. Calculate coefficient of rank correlation unit with the help of spearman's Rank correlation method / Karl Pearson's method. 4

x	30	25	35	43	27	25	31	33
y	32	30	26	28	27	31	34	28

Q32. a) Write three limitations of statistics. 3
 b) Explain the scattered diagram method of correlation. 3

Q33. Calculate Price Index by 6

- a) Laspeyre's Price Index
- b) Paasche's Price Index
- c) Fisher's Price Index

Commodity	1999 (Price)	1999 (Quantity)	2008 (Price)	2008 (Quantity)
A	2	200	3	300
B	8	72	10	100
C	12	60	15	90
D	7	49	10	80

4. _____ Wellness is the ability to understand self and cope with the challenges life can bring. [1]

- a) Spiritual
- b) Social
- c) Emotional
- d) Environmental

5. **Assertion (A):** Yoga paves the path for the spiritual development of an individual. [1]
Reason (R): Yoga for a common person contains the practices of yama, niyama, asana, pranayama, pratyahara, kriya and meditation, which are helpful to keep oneself physically fit, mentally alert and emotionally balanced.

- a) Both A and R are true and R is the correct explanation of A.
- b) Both A and R are true but R is not the correct explanation of A.
- c) A is true but R is false.
- d) A is false but R is true.

6. Zero-degree temperature is an example of scale of measurement. [1]

- a) Interval
- b) Ordinal
- c) Ratio
- d) Nominal

7. Which of the following is not a traditional Indian game? [1]

- a) Bull fight
- b) Kho-Kho
- c) Kabaddi
- d) Kushti

8. Identify the component of wellness: [1]



- a) Emotional wellness
- b) Environmental wellness
- c) Physical wellness
- d) Spiritual wellness

9. Match List - I with List - II and select the correct answer from the code given below: [1]

List-I Symbolism	List-II Olympic Symbols
(a) Sun's rays used	(i) Olympic Motto
(b) Blue, Yellow, Black, Green, Red	(ii) Olympic Flame
(c) Citius, Altius, Fortius	(iii) Olympic Rings
(d) Excellence, Friendship, Respect	(iv) Olympic Values

a)(a) - (iii), (b) - (iv), (c) - (ii), (d) - (i) b)(a) - (ii), (b) - (iii), (c) - (i), (d) - (iv)

c)(a) - (ii), (b) - (iv), (c) - (iii), (d) - (i) d)(a) - (iii), (b) - (ii), (c) - (i), (d) - (iv)

10. **Assertion (A):** Technique is an imaginary model of performing any task in cyclic manner. [1]

Reason (R): Acquiring style is a long and continuous process in which a player sets an imaginary mechanical model in his/her mind for performing any skill.

a) Both A and R are true and R is the correct explanation of A. b) Both A and R are true but R is not the correct explanation of A.

c) A is true but R is false. d) A is false but R is true.

11. When did the revival of Olympic games took place? [1]

a) 1892 b) 1899
c) 1895 d) 1896

12. _____ in sport is being able to execute the techniques required at the right time and place, successfully, regularly, and with minimal effort. [1]

a) Technique b) Strategy
c) Skill d) Tactics

13. Physical Education is the sum of changes in an individual caused by experience centring motor activity. Who said this? [1]

a) Prince martin b) Charls A. Butchar

c)Millions

d)Cassidy

14. Regular physical exercise results in _____. [1]

a)improved functional status

b)All of these

c)improved cognitive abilities

d)quality of life

15. _____is the first teacher of yoga. [1]

a)Ramdev

b)Krishan Kumar

c)Yogeshwar

d)Patanjali

16. Which is not an importance of Biomechanics? [1]

a)Improvement of Technique

b)Improvement of sports
Equipments

c)To understand the structure of
Movement & effect of forces
on the Movement

d)To understand Physiology of
human body

17. What does the term **citius** mean? [1]

a)Slower

b)Faster

c)Higher

d)Stronger

18. The body structure of mesomorphic people is like [1]

a)Large muscles and bones

b)Solid

c)Obese

d)Fatty

Section B Attempt any 5

questions

19. State the uses of Anthropometric measurement. [2]

20. What is a sports facility? [2]

21. What is cardiac output? [2]

22. Define Circumduction. [2]

23. What is the role of a speech therapist for children with special needs? [2]
24. How many types of doping are there? [2]

Section C Attempt any 5

questions

25. How do test, measurement and evaluation help in future research? Mention three reasons. [3]
26. How does angle of projection help as a factor athletes in games and sports? [3]
27. Give any responsibility of an athlete to control doping? [3]
28. Why are test and measurement important in sports? [3]
29. What are the major muscles involved in jumping & throwing? [3]
30. Write a short note on blood as a part of circulatory system. [3]

Section D

31. Sun Rise Public School organized a program, in which many people from different career backgrounds related to physical education were present there. [4]



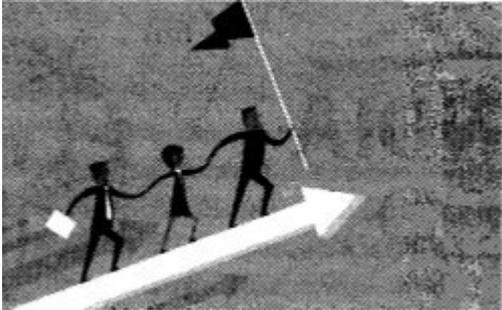
Identify the career.

1. _____ is shown in the above picture.
- A. Physical Therapist
 - B. Occupational Therapist
 - C. Speech Therapist
 - D. Clinical Psychologist
2. They help people to improve their _____ to perform daily.
- A. skills
 - B. hobbies
 - C. ability
 - D. motivation

3. The person shown in the above picture is also known as _____.
- A. Counsellor
 - B. Psychologist
 - C. Social Worker
 - D. Nurse
4. They treat people who have mental, physical, emotional, and _____ disabilities.
- A. social
 - B. cognitive
 - C. sensory
 - D. developmental

32. Anand, explains the value of the Olympics in his class.

[4]



Identify the olympic value.

1. _____ is shown in the above picture.
- A. Excellence
 - B. Competition
 - C. Teamwork
 - D. Victory
2. The important thing is not winning, but taking _____ is important.
- A. risks
 - B. part
 - C. time
 - D. credit
3. This value makes the process and _____ the healthy combination of body, will, and mind.
- A. complicates
 - B. enjoys

C. enhances

D. enjoying

4. The Olympics wants every player to strive for their best and excellence and _____ people to be the best they can be.

A. discourage

B. challenge

C. motivate

D. pressure

33. Mohit was fit and fine, but his friend was not, so he tells his friend the importance of physical fitness. [4]



Identify the importance of physical fitness.

1. _____ is the importance of physical fitness.

A. Mental strength

B. Physical strength

C. Flexibility

D. Endurance

2. A combined routine, including proper exercise and diet, has _____ effect on brain function.

A. Negative

B. Neutral

C. Positive

D. Detrimental

3. It also keeps an individual _____ strong.

A. Emotionally

B. Physically

C. Socially

D. Mentally

4. It elevates the flow of _____ to the brain and enhances the memory.

- A. Nutrients
- B. Blood
- C. Oxygen
- D. Hormones

Section E Attempt any 3 questions

- 34. List down any four asanas used for prevention of Hypertension. Explain the procedure and contraindication of any one of them with help of a stick diagram. [5]
- 35. Write the importance of Anatomy and Physiology in physical education and sports. [5]
- 36. Which principles are required to be followed to make the adapted physical education effective? Explain.
- 37. Elucidate five reasons for the importance of physiology. [5]

