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 season have 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 an cause harm to organisms.

4. More than a quarter of all fish now contained plastic, according to a recent study why analysed the guts of fish sold in California. Scientist fear that chemical sin plastician also chemicals which attach themselves to plastic in natural environment could each poisoning and many disorders in marine lie if consumed in huge quantities.

5. Even human 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 effect on the lungs similar to air fumes.

6. Volunteers around the world collect trash and tally up what they find on the fall in Ocean's 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. Boyance Slat, a Dutch student has developed a technology that could sift dangerous plastic particle out of the ocean and sell them for profit or re-cycling. Richard Thompson recommended that people avoid using products with micro beads and to make sure they dispose of all plastic products in a appropriate way by, if possible.

2,117,931 Cigarettes

1,140,222 Food Wrappers/Containers

1,065,171 Plastic Beverage Bottles

1,019,902 Plastic Bags

958,893 Caps/Lids

692,767 Cups/Plates/Cutlery

611,048 Straw/Stirrers

521,730 Glass Beverage Bottles

339,875 Beverage Cans

298,332 Paper Bags

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 warming 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 blancks 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 40-50words. (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 40-50words. 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?

<div align="center">**OR**</div>

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?

St. PBN Public School
SAMPLE QUESTION PAPER (THEORY)
SUBJECT: PHYSICS
Class: XI

Maximum Marks: 70 Marks　　　　　　　　　　　　　　　　**Time Allowed**: 3 hours.

General Instructions:

(1) There are 35 questions in all. All questions are compulsory

(2) This question paper has five sections: Section A, Section B, Section C, Section D and Section E. All the sections are compulsory.

(3) Section A contains eighteen MCQ of 1 mark each, Section B contains seven questions of two marks each, Section C contains five questions of three marks each, section D contains three long questions of five marks each and Section E contains two case study-based questions of 4 marks each.

(4) There is no overall choice. However, an internal choice has been provided in section B, C, D and E. You have to attempt only one of the choices in such questions.

5. Use of calculators is not allowed.

SECTION A

Q. N O.		MARKS
1	If force (F), length (L) and time (T) are assumed to be fundamental units, then the dimensional formula of the mass will be (a) $FL^{-1}T^2$ 　　　　　　(b) 　　　　　$FL^{-1}T^{-2}$ (c) $FL^{-1}T^{-1}$ 　　　　　(d) 　　　　　FL^2T^2	1
2	Two balls are dropped from heights h and $3h$ respectively from the earth surface. Theratio of time of these balls to reach the earth is (a) $1:\sqrt{3}$ 　　　　　　(b) $\sqrt{3}:1$ (c) $3:1$ 　　　　　　　(d) $1:3$	1
3	The angle between vectors $\vec{A} = 10\hat{\imath} + 10\hat{\jmath} - 5\hat{k}$ and $\vec{B} = 10\hat{\imath} - 5\hat{\jmath} + 10\hat{k}$ is: (a) 30° 　　　　　　(b) 45° (c) 60° 　　　　　　(d) 90°	

4	The momentum of a system is conserved (a) Always (b) Never (c) In the absence of an external force on the system (d) None of the above	1
5	If a long spring is stretched by 0.02 m, its potential energy is U. If the spring is stretched by 0.1 m, then its potential energy will be (a) $\frac{U}{5}$ (b) U (c) $5U$ (d) $25U$	1
6	If radius of earth is R then the height 'h' at which value of 'g' becomes one-fourth is (a) $\frac{R}{4}$ (b) $\frac{3R}{4}$ (c) R (d) $\frac{R}{8}$	1
7.	Two wires of copper having the length in the ratio 4 : 1 and their radii ratio as 1 : 4 are stretched by the same force. The ratio of longitudinal strain in the two will be (a) 1 : 16 (b) 16 : 1 (c) 1 : 64 (d) 64 : 1	1
8.	The surface tension of a liquid at its boiling point (a) Becomes zero (b) Becomes infinity (c) is equal to the value at room temperature (d) is half to the value at the room temperature	1
9.	Water has maximum density at (a) $0°C$ (b) $32°F$ (c) $-4°C$ (d) $4°C$	1
10.	The coefficient of superficial expansion of a solid is 2×10^{-5} /°C. It's coefficient of linear expansion is (a) $4 \times 10^{-5}/°C$ (b) $3 \times 10^{-5}/°C$ (c) $2 \times 10^{-5}/°C$ (d) $1 \times 10^{-5}/°C$	1

11.	A cycle tyre bursts suddenly. This represents an (a)Isothermal process (b) Isobaric process (c)Isochoric process (d) Adiabatic process	1
12.	Which is incorrect (a) In an isobaric process, $\Delta p = 0$ (b) In an isochoric process, $\Delta W = 0$ (c) In an isothermal process, $\Delta T = 0$ (d) In an isothermal process, $\Delta Q = 0$	1
13.	The temperature at which the root mean square velocity of a molecule will be doubled than at $100°C$ (a) $1219°C$ (b) $1492°k$ (c) $400°C$ (d) $400\ K$	1
14.	The amplitude of a particle executing S.H.M. with frequency of $60\ Hz$ is $0.01\ m$. The maximum value of the acceleration of the particle is (a) $144\pi^2 m/sec^2$ (b) $144 m/sec^2$ (c) $\frac{144}{\pi^2} m/sec^2$ (d) $288\pi^2 m/sec^2$	1
15.	The equation of a sound wave is $$y = 0.0015\ sin(\ 62.8x + 316t)$$ The wavelength of this wave is (a) 0.2 unit (b) 0.1 unit (c) 0.3 unit (d) Cannot be calculated	1

16.	**Two statements are given-one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as 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 and R is also false
	ASSERTION:
	A player lowers his hands while catching a cricket ball and suffers less reaction force
	REASON:
	For the given momentum of the ball the reaction force inversely proportional to duration of catching time.
		1

17.	Two statements are given-one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as 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 and R is also false **ASSERTION:** The torque of a given force is maximum when the angle between force and position vector of the point where force is acting is 90^0. **REASON:** Torque and force both are the vector quantity.	1
18.	Two statements are given-one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as 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 and R is also false **ASSERTION:** A beaker is completely filled with water at $4°C$. It will overflow, both when heated or cooled. **REASON:** There is expansion of water below and above $4°C$.	1

SECTION B

19.	The position of a particle is given by $\vec{s}(t) = 5t\,i + 6t^2\,j + 10k$. Where t is in seconds. Find the velocity $\vec{v}(t)$ and acceleration $\vec{a}(t)$ of the particle at (i) t = 1s. (ii)t=3s.	2
20.	The sum and difference of two vectors are equal in magnitude. Show that they are mutually perpendicular to each other. Or Find the angle of projection in projectile motion for which horizontal range and maximum height are equal.	2
21.	State the number of significant figures of following- (i) 0.07m (ii) 2.604km (iii) 3.9040N (iv) 2.06×10^{-9}s	2
22.	A particle performs uniform circular motion with an angular momentum L. If the frequency of particle's motion is doubled and its K.E is halved, what happens to the angular momentum?	2

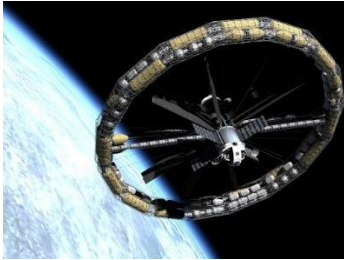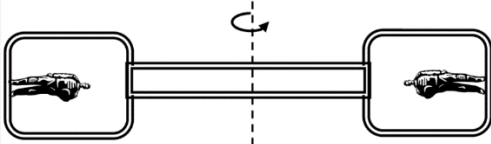| 23.	Find expression of work done in an isothermal process in terms of initial and final volume.	2
24.	Draw a typical stress strain curve for a ductile metal and mark the points which refer to proportional limit, Elastic limit and fracture point.	2
25.	Write Newton's formula for the speed of sound in air. Explain how is it corrected by Laplace.	2

SECTION C

26.	State the principle of superposition of waves. Show that only odd harmonics can be produced in air column with one end closed and other open.	3
27.	Find the expression of the time period T of a pendulum for small amplitude of effective length 'l' and mass of the bob 'm', acceleration due to gravity 'g'.	3
28.	Define Degree of freedom. If degree of freedom 'f', γ is the ratio of Cp, Cv. Show that $$\gamma = 1 + \frac{2}{f}$$ OR Show that the average kinetic energy per molecule is directly proportional to the absolute temperature of the gas.	3
29.	Define Torque and Angular momentum. Obtain relation between them.	3
30.	If the frequency of a stretched string depends upon length of string (l), tension in the string (T) and mass per unit length (μ) of the string. Find expression for frequency of vibration of string using method of dimensions.	3

SECTION D

31.	(i) Draw velocity – time graph for uniformly accelerated motion. Obtain the three equations of motion graphically. (ii) A ball is thrown vertically upwards with a velocity of 20 m/s from the top of a building. The height of the point form where the ball is thrown is 25 m from the ground. (a) How high will the ball rise? and (b) how long time will it takes before the ball hits the ground? (g= 10 m/s^2) OR (i) Define limiting friction and angle of friction. (ii) A body of mass 5 kg is sliding on a surface inclined at an angle 60º with the horizontal. Calculate the acceleration of the body and angle of friction. The coefficient of kinetic friction between the body and the surface is 0.5 and g = $10_{ms^{-2}}$	5
32.	What is perfectly elastic collision? Obtain an expression for the final velocities for the bodies undergoing elastic collision in one dimension. Also prove that if the masses are equal after collision the velocities get interchanged. OR (i) State and prove Work-Energy Theorem?	5

	(ii) If the momentum of a body increases by 10%, find how much percent its kinetic energy will increase?	
33.	(i) State Stoke's law for the viscous drag experienced by the spherical body falling through a viscous liquid. (ii) Why does a spherical body achieve terminal speed? (iii) On what factors does the terminal speed of a spherical body falling in a viscous medium depend? (iv)Give one example each of motion around us with (a) Positive (b) Negative terminal velocity. OR (A) State and prove Bernoulli's theorem with the help of a neat and labeled diagram. (B) It is advised not to stand near the edge of platform when the fast-movingtrain is approaching. Give reason	5

SECTION E

| 34. | **Case Study:**
 Read the following paragraph and answer the questions.
 In the movie "2001: **A Space Odyssey**", a rotating spacecraft provides artificial gravity. The people would be walking inside the circle; their feet toward the exterior and their head toward the centre; the floor and ceiling would curve upwards. The radius of the outer rim of the space 'wheel' is 1.0 km.

 (i) What is the value of artificial acceleration at the center of the aircraft ?
 (ii) Calculate the angular velocity for the spacecraft to generate an artificial acceleration due to gravity equals to 10 m/s².
 (iii) What is its equivalent no. of revolutions per min?
 <div align="center">OR</div> (iii) calculate the tangential speed of the wheel of this space craft? | 4 |

35.	**Case Study:**	4
	Read the following paragraph and answer the questions.	

Projectile Motion, by definition, is the motion of an object thrown or projected into the air, only subject to acceleration due to gravity. The motion has a constant horizontal velocity combined with a constant vertical acceleration caused by

(a) Water is ejected out of a pipe held obliquely
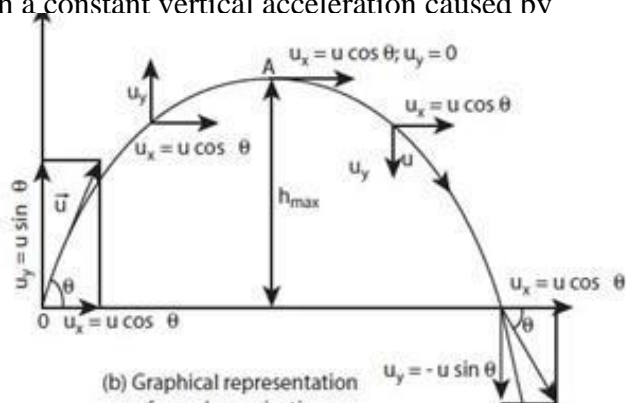
(b) Graphical representation of angular projection

(i) At what point the velocity of projectile will be minimum during its projectile motion?

(ii) What is the trajectory of projectile in angular projection?

(iii) Show that the horizontal range will be same for angle of projection θ and $(90^0-\theta)$

OR

(iii) Show that the horizontal range will be same for pair of angles of projection $(45^0+\theta)$ and $(45^0-\theta)$

St. PBN PUBLIC SCHOOL
ANNUAL EXAMINATION (SAMPLE PAPER)
CLASS-XI
SUBJECT - CHEMISTRY

TIME: 3 Hours   **MM: 70**
 General Instructions:
a) There are 33 questions in this question paper with internal choice.
b) SECTION A consists of 16 multiple-choice questions carrying 1 mark each.
c) SECTION B consists of 5 very short answer questions carrying 2 marks each.
d) SECTION C consists of 7 short answer questions carrying 3 marks each.
e) SECTION D consists of 2 case- based questions carrying 4 marks each.
f) SECTION E consists of 3 long answer questions carrying 5 marks each.
g) All questions are compulsory.

SECTION-A

1. How many significant figures are there in 3.070 & 0.0025?
 A) 2 & 5   (B) 4 & 2
 (C) 1 & 2   (D) 6 & 4

2. How many number of atoms are present in 52 u of He?
   (A) 11   (B) 15   (C) 13   (D) 12

3. Ethyne on passing through red hot iron tube at 873K undergoes cyclic polymerization. Three molecules of ethyne polymerise to form:
   (A) ethane   (B) ethane   (C) benzene   (D) ethanol

4. Which element is isoelectronic with Na^+?
   (A) Ne   (B) He   (C) K+   (D) C

5. The element with atomic number 57 belongs to:
   (A) s-block   (B) p-block
   (C) d-block   (D) f-block

6. Hydrogen bonds are formed in many compounds, e.g., H_2O, HF, NH_3. The boiling point of such compounds depends to a large extent on the strength of hydrogen bond and the number of hydrogen bonds. The correct decreasing order of the boiling points of above compounds is:
   (A) HF > H_2O > NH_3 (B) H_2O > HF > NH_3
   (C) NH_3 > HF > H_2O (D) NH_3 > H_2O > HF

7. Arrange the following ia decreasing order of their boiling points.
(A) n-Butane   (B) 2-Methylbutane   (C) n-Pentane   (D) 2,2-Dimethylpropane
   (a) A > B > C > D   (b) B > C > D > A
   (c) D   >C>B>A   (d) C >B>D > A

8. Which of the following cannot be represented by resonance structures?
   (a) Dimethyl ether   (b) Nitrate anion
   (c) Carboxylate anion   (d) Toluene

9. Arrange the following in the increasing order of electronegativity.
   a) $sp^2 < sp < sp^3$ b) $sp^3 < sp^2 < sp$
   c) $sp < sp^2 < sp^3$ d) $sp^3 < sp < sp^2$

10. What will be the value of pH of 0.01 mol dm^{-3} CH_3COOH ($K_a = 1.74 \times 10{-5}$)?
   (A) 3.4   (B) 3.6   (C) 3.9   (D) 3.0

11. Which one is more stable cation?

(A) $CH_3)_33C^+$ (B) $CH_3C_+H_2$ (C) C^+H_3 (D) All of these

12. Which of the following is not an example of redox reaction?

(A) $CuO + H_2 \rightarrow Cu + H_2O$

(B) $Fe_2O_3 + 3CO \rightarrow 2Fe + 3CO_2$

(C) $2K + F_2\ 2KF$

(D) $BaCl_2 + H_2SO<sub4 \rightarrow BaSO_4 + 2HC1$

ASSERTION-REASON BASED QUESTIONS:

In the following questions a statement of Assertion (A) followed by a statement of Reason (R) is given. Choose the correct option out of the choices given below each question.

(a)   A and R both are correct, and R is the correct explanation of A

(b)   A and R both are correct, 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. Assertion (A): Among the two O-H bonds in H20 molecule, the energy required to break the first O-H bond and the other O-H bond is the same.

     Reason (R): This is because the electronic environment around oxygen is the same even after breakage of one O-H bond.

14. Assertion (A): Work and internal energy of a system are state functions.

     Reason (R): The sum of q + w is a state function.

15. Assertion (A): Pent-1-ene and pent-2-ene are position isomers.

     Reason (R): Position isomers differ in the position of functional group or substituent.

16. Assertion (A): Cyclobutane is less stable than cyclopentane

     Reason (R): Presence of bent bonds causes loss of orbital overlap.

Section-B

17. (a) Which is more informative? Empirical formula or molecular formula.

     (b) Calculate the number of carbon atoms in 34.20g of $C_6H_{12}0_6$.

18. How would you explain the fact that first ionisation enthalpy of sodium is lower than that of magnesium but its second ionisation enthalpy is higher than that of magnesium?

19. Consider the following species:

N^{3-}, O^{2-}, F^- , Na^+, Mg^{2+} and Al^{3+}

(a) What is common in them?

(b) Arrange them in the order of increasing ionic radii.

20. (a) Name the hybridisation involved in:

       (i) C_2H_2 (ii) SF_6

    (b) Why dipole moment of CO_2 is zero while H_2O is a polar though both have similar formula?

                 OR

    (a) Calculate the bond order for N^{2+} molecule.

    (b) Water molecule has bent structure whereas $BeCl_2$ has a linear structure. Give Reason.

21. (a) What will be equilibrium constant for the reverse reaction
    (b) At equilibrium, the concentrations of $N_2 = 4.2 \times 10^{-3}M$, $O_2 = 5.3 \times 10^{-3}M$ and $NO = 3.8 \times 10^3M$ in a sealed vessel at 800K. What will be K^c for the reaction.

Section-C

22. 20g of $CaCO_3$ and 20 g of H_2SO_4 react to give $CaSO_4$along with water and CO_2.
(a) Determine the limiting reagent for the above reaction.
(b) How much CaS04 will be formed?
(c) If 1 mole of gas occupies 22.4 L at STP then calculate the volume of CO_2 evolved in the above reaction. [Ca = 40, C = 12, O = 16, H = 1, S = 32]

23. Identify the reagents shown in bold in the following equations as nucleophiles or electrophiles:
(a) $CH_3COOH + HO^- \rightarrow CH_3COO^- + H_20$
(b) $CH_3COCH_3 + CN^- \rightarrow (CH_3)_3C(CN)(OH)$
(c) $C_6 H_6 + CH_3CN \rightarrow C_6H_5COCH_3$

24.(a) Using the VSEPR theory, identify the type of hybridization and draw the structure of OF_3. What are oxidation states of O and F?
(b) $MgCl_2$ is linear, but $SnCl_2$ is angular. Why?

25.Two moles of an ideal gas initially at 27°C and 1 atm pressure are compressed isothermally and reversibly till the final pressure of the gas 10 atm. Calculate the values of q, W and AU for this process.

26. For the following equilibrium, K =6.3 x 10^{14} at 1000 K. $NO(g)+O_3 \longrightarrow NO_2(g) + O_2(g)$ Both the forward and reverse reactions in the equilibrium are elementary bimolecular reactions. What is K_c for the reverse reaction?

27.Explain why?
(a) Reaction $FeSO_4(aq) + Cu(s) \rightarrow CuSO_4(aq) + Fe(s)$ does not occur.
(b) Zinc can displace copper from aqueous $CuSO_4$ solution but Ag can not.
(c) Solution of $AgNO_3$ turns blue when copper rod is immersed in it.

28.Why do alkenes prefer to undergo electrophilic addition reaction while arenes prefer electrophilic substitution reaction? Explain.

Section-D

29.Read the following passage and answer the following questions:
A student is given the following elements: Sodium (Na), Magnesium (Mg), and Aluminum (Al). The student is asked to place them in the periodic table and predict their properties.
A student is given two unknown metals, X and Y, and is told that one is an alkali metal and the other is an alkaline earth metal. The student performs some experiments and finds that X reacts violently with water, while Y reacts slowly with water.
   1. Identify which metal is from Group 1 and which is from Group 2. Justify your answer.
   2. What makes noble gases chemically inert?
   3. Which element has the highest ionization energy? Explain based on periodic trends.

30.Read the following passage and answer the following questions:
A student prepares hot coffee and pours it into a thermos flask. The flask is well insulated, preventing heat exchange with the surroundings. The student then adds sugar to the coffee and stirs it.
1. What type of thermodynamic system is the coffee in the thermos? Explain.
2. State the first law of thermodynamics and apply it to this system.
3. If the flask is opened and heat escapes, which type of system does it become?

Section-E

31.Attempt any five of the following:

(a) What is de Broglie wavelength for an electron with light velocity?

(b) What is angular momentum of electron in 5th shell?

(c) What is the relation between probability of finding an electron and the orbital wave function?

(d) Can we apply Heisenberg's uncertainty principle to a stationary electron? Why or why not?

(e) Write the maximum number of electron in a sub-shell with $l = 3$ and $n = 4$.

(f) Write the maximum number of electron that can be associated with the following set of quantum numbers?

$n = 3$, $l = 1$ and $ml = -1$

(g) Write the maximum number of electron that can be accommodated in an atom in which the highest principal

quantum number value is 4.

32.(a) Why is benzene extra ordinarily stable though it contains three double bonds?

(b) In the presence of peroxide, addition of HBr to prepare propene takes place according to anti

Markovnikov's rule but peroxide effect is not seen in the case of HC1 and HI. Explain.

(c) How will you convert: Acetylene to chlorobenzene

OR

(a) An alkene 'K on ozonolysis gives a mixture of ethanal and pentan-3- one. Write structure and

IUPAC name of 'A'.

(b) For the following compounds, write structural formulas and IUPAC names for all possible isomers

having the number of double or triple bond as indicated:

(i) C_4H_8 (one double bond)

(ii) C_5H_8 (one triple bond)

33.1. Define structural isomerism and resonance with suitable examples.

2. Explain the following types of organic reactions with examples:

Substitution reaction ,Addition reaction ,Elimination reaction

3. Differentiate between nucleophilic and electrophilic substitution reactions with suitablexamples.

4. Define Inductive effect and Mesomeric effect with examples.

5. How does hybridization affect the bond length and bond strength in alkanes, alkenes, and alkynes?

St. PBN PUBLIC SCHOOL
ANNUAL EXAMINATION (SAMPLE PAPER)
SUBJECT – BIOLOGY
CLASS - XI

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. A group of closely related class is called
 (a) Genus   (c) Phylum
 (b) Family   (d) Order

2. In developing embryo RBCs are formed in

(a) lymph node   (c) liver
(b) bone marrow   (d) spleen

3. The yellow pigment derived from heme breakdown and excreted by kidneys is

(a) uric acid   (c) cholesterol
(b) urochrome   (d) melanin

4. When cocaine is used as a stimulant, it interferes with the CNS at the reuptake   of the _____ at the synapses
(a) testosterone   (c) adrenaline
(b) dopamine   (d) none of these

5. The hormone that participates in metabolizing calcium and phosphorous is called _____
(a) glucagon   (c) glycogen
(b) calcitonin   (d) none of these

6. As we go from species to kingdom in a taxonomic hierarchy, the number of common characteristics
 (a) remain same   (b) will increase
 (c) will decrease   (d) may increase or decrease

7. ICBN stands for
 (a) International Code of Botanical Nomenclature
 (b) Indian Code of Botanical Nomenclature
 (c) Indian Congress of Biological Names
 (d) Indian Congress of Botanical Nomenclature

8. The most common secondary structure of proteins is
(a) β-pleated sheet   (c) β-pleated sheet non-parallel
(b) β-pleated sheet parallel   (d) α-helix

9. Flame cells are the excretory structures for
(a) Annelida   (b) Coelenterates
(c) Platyhelminthes   (d) Echinodermata

10. The _____ is a membrane-bound structure located within the muscle   cells. Its main function is to store calcium ions.
(a) sarcoplasmic reticulum   (c) myosin
(b) fibrin   (d) None of above

11. Which of the following combinations is incorrect?
(a) Nematoda- roundworms, pseudocoelomate
(b) Calcarea- gastrovascular cavity, coelom present
(c) Echinodermata- coelom present, bilateral symmetry
(d) Platyhelminthes- gastrovascular cavity, flatworms, acoelomate

12 Which of the plant groups needs both land and water to complete their life cycle?
(a) Tracheophyta   (c) Thallophyta
(b) Pteridophyta   (d) Bryophyta

Q. no are 14 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) : Chlorella could be utilised to keep the air pure in space vehicles.
Reason(R) : The space travelers feed on Chlorella soup**.**

14. Assertion(A): The colour of brown algae varies from olive green to brown.
Reason(R): In brown algae, fucoxanthin is responsible for colour variation.

15. Assertion(A): Cnidoblasts are present on the tentacles and the body in cnidarians.
Reason(R): Cnidoblasts are used for anchorage, defence and capture of the prey.

16. Assertion(A) : Sponges belong to Porifera.
   Reason(R) : Sponges have canal system.

Section B

17. State why the respiratory pathway is referred to as an amphibolic pathway?
18. Explain:
a) Hypertension
b) Coronary Artery Disease
19. Examine the following diagram and answer the following questions:
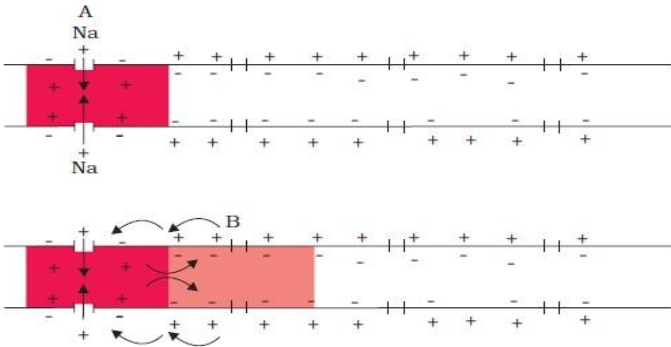
a) In which form impulse is carried from point A to point B in the given diagram?
   b)After an action potential, in which direction does current flow outside the membrane?

20. Draw a labelled diagram of neuron.

21. Differentiate between mitosis & meiosis.

Section C

22.Which hormonal deficiency is responsible for the following
   (a) Diabetes mellitus   (b) Goiter   (c) Critinism
23. Briefly describe different types of meristematic tissues found in plants with the help of diagram.
24 (a) Multicellular organisms have division of labour. Explain (1+2)
   (b) Label the following part and name the organelle

25. Briefly explain the types of flowers on the basis of position of ovary.
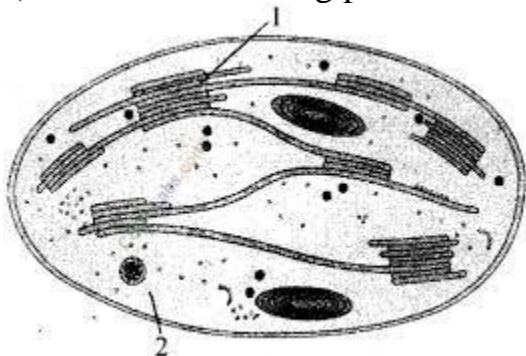26. You are given two slides having T.S. of roots and stems. How will you identify which slide is of root and which is of stem?
27. Differentiate between C3 & C4 plants.
28. How does photosystem I differ from photosystem II?

<div align="center">OR</div>

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

Section - D

29. (a) What is double blood circulation? Explain it with the help of well labelled diagram of human heart.
    (b) Why SA node is known as pacemaker of heart?

<div align="center">OR</div>

   Distinguish between
   a) Follicle-stimulating hormone and luteinizing hormone.
    b) Somatostatin and somatomedin

30. (a) How does internal & external respiration take place in humans?
    (b) Define- Tidal volume & Residual volume

<div align="center">OR</div>

      Explain the chemiosmotic hypothesis?

31. (a) Describe the steps in urine formation with the help of well labelled diagram.
     (b) Define- Ball & socket joint, Hinge joint

<div align="center">OR</div>

    (a) Frogs are beneficial for mankind, justify the statement.
    (b) Both gymnosperms and angiosperms bear seeds then why they classified separately?

Section - E

32.Case Based Question

Muscle is a specialized tissue of mesodermal origin. About 40-50 per cent of the body weight of a human adult is contributed by muscles. They have special properties like excitability, contractility, extensibility and elasticity. Muscles have been classified using different criteria, namely location, appearance and nature of regulation of their activities. Based on their location, three types of muscles are identified – Skeletal, Visceral and Cardiac.

Skeletal muscles are closely associated with the skeletal components of the body. They have a striped appearance under the microscope and hence are called striated muscles. As their activities are under the voluntary control of the nervous system, they are known as voluntary muscles too. They are primarily involved in locomotor actions and changes of body postures. Each organized skeletal muscle in our body is made of a number of muscle bundles or fascicles held together by a common collagenous connective tissue layer called fascia.

Visceral muscles are located in the inner walls of hollow visceral organs of the body like the alimentary canal, reproductive tract, etc. They do not exhibit any striation and are smooth in appearance. Hence, they are called smooth muscles (non striated muscle). Their activities are not under the voluntary control of the nervous system and are therefore known as involuntary muscles. They assist, for example, in the transportation of food through the digestive tract and gametes through the genital tract.

Cardiac muscles are the muscles of heart. Many cardiac muscle cells assemble in a branching pattern to form a cardiac muscle. Based on appearance, cardiac muscles are striated. They are involuntary in nature as the nervous system does not control their activities directly.

1.) Which of the following muscles are known as smooth muscle?
   a) Skeletal   d) Both a & b
   b) Visceral   c) Cardiac

2.) Define non striated muscle with example.

3.) Why cardiac muscles come under the category of involuntary muscles?

4.) What is meant by fascia?
            Or
   Write two examples of the organs that are made by mesoderm .

33.Case based question

It has been observed that some plants require a periodic exposure to light to induce flowering. It is also seen that such plants are able to measure the duration of exposure to light. For example, some plants require the exposure to light for a period exceeding a well-defined critical duration, while others must be exposed to light for a period less than this critical duration before the flowering is initiated in them. The former group of plants are called long day plants while the latter ones are termed short day plants. The critical duration is different for different plants. There are many plants, however, where there is no such correlation between exposure to light duration and induction of flowering response; such plants are called day-neutral plants. It is now also known that not only the duration of light period but that the duration of dark period is also of equal importance. Hence, it can be said that flowering in certain plants depends not only on a combination of light and dark exposures but also their relative durations. This response of plants to periods of day/night is termed photoperiodism. It is also interesting to note that while shoot apices modify themselves into flowering apices prior to flowering, they (i.e., shoot apices of plants) by themselves cannot perceive photoperiods. The site of perception of light/dark duration are the leaves. It has been hypothesised that there is a hormonal substance(s) that is responsible for flowering. This hormonal substance migrates from leaves to shoot apices for inducing flowering only when the plants are exposed to the necessary inductive photoperiod.

1.) _____ plant requires exposure to light for a period of less than critical duration.

a) Short-day plants   b) Long-day plants

c) Day-neutral plants   d) None of the above

2.) Define photoperiodism.

       Or

  Give two example of flowering plants.

3.) Define Day-neutral plants with suitable example.

4.) How does photoperiod correlate with hormonal substances?

St. PBN PUBLIC SCHOOL, GURUGRAM
ANNUAL EXAMINATION (SAMPLE PAPER)
CLASS XI
COMPUTER SCIENCE : 083

Time: 3 hours   **M.M:70**

GENERAL INSTRUCTIONS:
- Please check this question paper contains 35 questions.
- This paper is divided into 5 Sections- A, B, C, D and E .
- Section A, consists of 18 questions (1 to 18).Each question carries 1 mark.
- Section B, consists of 7 questions (19 to 25). Each question carries 2 marks.
- Section C, consists of 5 questions (20 to 30). Each question carries 3 marks.
- Section D, consists of 3 questions (31 to 33). Each question carries 5 marks.
- Section E consists of 2 questions (34 to 35). Each question carries 4 marks.
- All programming questions are to be answered using Python Language only.

.

SECTION- A

Choose the correct option and write in the answer sheet   **(1 x 18 = 18)**

1. How many bytes are in 1 Kilobyte?

   (a) 8 Bytes   (c) 1024 Bytes

   (b) 128 Bytes   (d) 256 Bytes

2. Convert $(300)_{10}$ into Hexadecimal equivalent.

   (a) $(12C)_{16}$ (c) $(32A)_{16}$

   (b) $(4D)_{16}$ (d) $(16B)_{16}$

3. Which of the following statements assigns the value 25 to the variable x in Python:

   (a) x ← 25   (c) x := 25

   (b) x = 25   (d) int x = 25

4. The data or text enclosed with single quote, double quote or triple quote is known as _____.

   (a) String   (c) Tuple

   (b) List   (d) Dictionary

5. The interactive interpreter of python is termed as _____

   (a) Python Shell   (c) Python Editor Mode

   (b) Python Script Mode   (d) Python Command Line

6. _____ are diagrams that show the step by step solution to a given problem.

   (a)Pie Chart   (c)Column Chart

   (b)Flow Chart   (d) Bar Chart

7. Which of the following falls under utilities?

a) Text editor

b) Backup

c) Disk defragmenter

d) All of these

8. Which abandons the current iteration of the loop?

(a)continue

(b)break

(c) stop

(d) infinite

9. Identify the invalid identifiers from the given options.

(a) 981a

(b)a

(c)a0

(d) _a0

10. Index of list starts from _____

(a) 10

(b) 0

(c) 11

(d) 110

11. Which of the following operator is used to concatenate the strings

(a) +

(b) *

(c) /

(d) -

12. Dictionary has a Unique _____

a) value

b) key

c) both

d) none of these

13. When a person is harassed repeatedly by being followed, called or written to, he/she is a target of:

(a) Bullying

(b) Identity theft

(c) Stalking

(d) Phishing

14. Which of the following is not a cybercrime?

(a) Denial of Service

(b) Man in the Middle

(c) Malware

(d) None of the above

15. Which of the following is relational operator?

a) =

b) <=

c) + =

d) None of these

16. _____ software is made to perform a specific task

a) System

b) Application

c) Utility

d) None of these

Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as

a) Both A and R are true and R is the correct explanation for A

b) Both A and R are true and R is not the correct explanation for A

c) A is True but R is False

d) A is false but R is True

17. **Assertion (A):** Higher precedence operator is evaluated before the lower precedence operator.

   Reason (R): For operators with equal precedence, the expression is evaluated from right to left.

18. **Assertion (A):** Data types are used to identify the type of data.

   Reason (R): Data types are two types as numbers and strings.

SECTION B

(2x 7 = 14)

19. **(i)** What will be the output of following code?

```
>>> print("14<=46:",14<=46)
```

   (ii) What will be the output of the following snippet?

   ```
   list1=[8,0,9,5]

   print(list1[::-1])
   ```
   (1+1)

20. **(i)** Write the python statement to type cast the float value of r = 98.40 into an integer type.

   (ii) Which statement is used in python to terminate the infinite loop? (1+1)

21. (i) Convert $(ABCD)_{16}$ to $(\ )_2$

   (ii) Draw a truth table of XOR Gate. (1+1)

   OR

   State and Prove De Morgan's First law using truth table (2)

22. Write a program to calculate the sum of all the elements of a list. (2)

23. Write Python code to find the number of words in a string input by the user. (2)

24. (i) Predict the output of the following code.

   Keys = {1,2,3,4,5}

   print(dict**.**fromkeys(keys))

   (ii) What is packing of tuples? (1+1)

25. What is the difference between Syntax error and Run-time error? (2)

SECTION C

(3x 5 = 15)

26. Draw the truth table and logical circuit of the given Boolean expression: F= P.Y + D**.** T+(A.B)   (3)

27. Write a Program in python to check whether the given string is Palindrome or not

(3)

28. What do you mean by Flowchart? Explain with example.

OR

Draw a flowchart to print the sum of first 10 natural numbers.   (3)

29. Explain the following terms:
   (i) Application software
   (ii) EEPROM
   (iii)Bar code reader   (3)

  30. Write an algorithm to check whether a number is prime number or not.   (3)

SECTION D

(5x 3 = 15)

31. Draw the logic circuit and truth table for the following Boolean expression:

   i.   (P, + D) . S + R,

   ii.   **(A .B) . (B+C . D,)**   (2+3)

32. (i) Write a Python program to accept a list of all the subject of Class X and display the list of subjects.

   (ii) Write a Python program to calculate area of circle and area of rectangle using concept of functions.

OR

(Option for (ii) part only)

What are the effects of cyber bullying and trolling?   (3+2)

33. (i) Why is it important to recycle e-waste?
   (ii) What are the techniques used in India for E-waste management?   (3+2)

SECTION E

(2 x 4 = 8)

34. ABC Technologies deals in hardware components required for assembling computer systems in the Nehru Place market. They provide reliable and efficient data storage devices to their customers.

   Four storage devices in which they deal are described below. Name the storage device being described and also list the appropriate category of storage.

   (i) Optical media which use one spiral track; red lasers are used to read and write data on the media surface; makes use of dual-layering technology to increase storage capacity.

(ii) Non-volatile memory chip: contents of the chip cannot be altered; it is often used to store the start-up routines in a computer.

(iii) Optical media which use blue laser technology to read and write data on the media surface.

(iv) Magnetic disc with very large storage capacity; can be used to store vast amounts of data; mostly fixed in computer cases and serves as the main storage device. (1+1+1+1)

35. **(i) Write a python program to print the following pattern:**

```
A
B B
C C C
D D D D
E E E E E
F F F F F
G G G G G G
```

(ii) Write a program to create a dictionary of phone numbers and person's name. Also write the code to search the phone number of a particular person name inputted by user. (2+2)

SAMPLE QUESTION PAPER - 1
Physical Education (048)
Class XI (2024-25)

Time Allowed: 3 hours   **Maximum Marks: 70**

General Instructions:

1. The question paper consists of 5 sections and 37 Questions.
2. Section A consists of question 1-18 carrying 1 mark each and is multiple choice questions. All questions are compulsory.
3. Sections B consist of questions 19-24 carrying 2 marks each and are very short answer types and should not exceed 60-90 words. Attempt any 5.
4. Sections C consist of Question 25-30 carrying 3 marks each and are short answer types and should not exceed 100-150 words. Attempt any 5.
5. Sections D consist of Question 31-33 carrying 4 marks each and are case studies. There is internal choice available.
6. Section E consists of Question 34-37 carrying 5 marks each and are short answer types and should not exceed 200-300 words. Attempt any 3.

Section A

1. _____ aims at developing a positive mindset. **[1]**

   a) Spiritual Development   b) Mental Development

   c) Emotional development   d) Social Development

2. The International Olympic Committee was established by whom? **[1]**

   a) Jesse Owens   b) Carl Lewis

   c) Jim Thorpe   d) Baron Pierre de Coubertin

3. Understanding of proper sports and exercise movements will allow the participant to be more _____ for long-term development. **[1]**

   a) efficient   b) technically sound

   c) All of these   d) prone to good habits

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]**
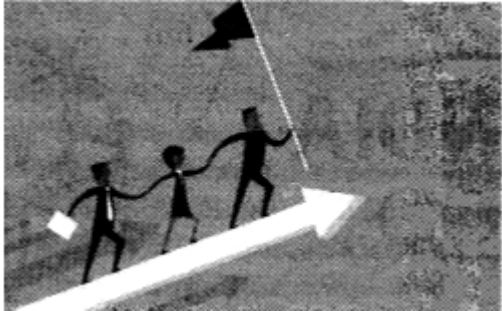
Identify the olympic value.

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 **[4]**
of physical fitness.

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. **[5]**

37. Elucidate five reasons for the importance of physiology. **[5]**