

ST. PBN PUBLIC SCHOOL ,GURUGRAM
UNIT TEST-I
CLASS-XI
(ENGLISH)
SAMPLE PAPER

GENERAL INSTRUCTIONS:

M.M-50

- 1. All questions are compulsory.**
- 2. Follow the instructions given with all questions.**

SECTION - A (READING)

Q1. Read the passage given below and answer the questions that follow: 10M

1. Man does not Live by food alone. Water is vital to human health and fitness. Although it is not a nutrient per se as are carbohydrates, fats, proteins, vitamins and minerals. It, in fact, is a key nutrient as no life is possible without it. Whereas we can do for weeks without food, we cannot live without water longer than a couple of days.

2. Water approximates 60 per cent of the body weight of human adults. The total amount of water in a man weighing 70 kilograms is approximately a little over 40 litres. It is an excellent solvent - more substances are soluble in water than in any other liquid known so far. This makes it an ideal constituent of the body fluids which sustain life supporting chemical reactions. It dissolves varied products of digestion and transports them to the rest of the body. Likewise, it dissolves diverse metabolic wastes and helps drain them out of the body. Besides, it performs a variety of functions - some well known and well understood while others not so well appreciated yet vita l. The no less important role of water is to distribute/ dissipate the body heat efficiently, thereby regulating body's temperature. Water accomplishes this role ideally because it has high thermal conductivity ensuring rapid heat transfer from one part to the other.

3. Above all, water has a high specific heat, implying that it takes a lot of heat to raise the temperature of water and likewise much heat must be lost to lower its temperature.

4. Drinking a lot of water is an inexpensive way to stay healthy. Even excess of water is harmless. Water therapy - drinking a litre or so the first thing in the morning is kidney-friendly.

5. The water regulation in the body is affected by hypothalamus in two ways i.e., (i) by creating the sensation of thirst which makes us drink water and (ii) by controlling the excretion of water as urine. If water regulation fails, medical emergency ensues.

Based on your understanding of the passage, answer the questions given below.

i. Water is vital to human health and fitness because:

(a) man does not live by food alone

- (b) it is an excellent solvent
- (c) we cannot survive for more than a couple of days without it
- d) it controls thirst and excretion of water as urine

ii. Water is called a key nutrient because:

- (a) it dissolves different products of digestion
- (b) no life is possible without it
- (c) it carries products to the rest of the body
- (d) it raises temperature of the body

iii. Infer one reason for the following, based on information in paragraph 2:

Water is an ideal constituent of the body fluids.

iv. Water regulates body temperature efficiently as:

- (a) it circulates easily
- (b) it has high-specific heat
- (c) it dissolves food easily
- (d) it has high thermal conductivity

v. What does the author mean when he uses the word 'regulation' in the last para?

- (a) Official rule
- (b) Control
- (c) Device for fair use
- (d) Worn or used as per rules

vi. State whether the following statement is TRUE or FALSE:

Water transports nutrients to the body.

vii. Which activity is considered as water therapy?

viii. Complete the following analogy correctly with a word from paragraph 3:

pitch : throw :: warm : _____

(Clue : Just like to pitch is a synonym of to throw, similarly to warm is a synonym of to...)

ix. Substitute the word 'sustain' with ONE WORD similar in meaning, in the following sentence from

paragraph 2:

This makes it an ideal constituent of the body fluids which sustain life supporting..

x. Fill in the blank by choosing the correct option.

_____ is an inexpensive way to stay healthy.

(a) Water

(b) Minerals

(c) Vitamins

(d) Proteins

SECTION B (WRITING & GRAMMAR)

Q2. Design a poster on the topic Save Environment in about 50 words.
7M

Q3. You are Mukul/Mahi of ST. PBN 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. (125-150 words)
7M

Q4. Choose the correct form of the tenses from the following. 4M

1. I _____ Rahim at the zoo yesterday. (saw, have seen, had seen)

2. I _____ Kumar this week. (haven't seen, didn't see, am not seeing)

3. This paper _____ twice weekly. (is appearing, appearing, appears)

4. Ashok fell off the ladder when he _____ the roof.

(is mending, was mending, mended)

Q5. Read the extract and answer the questions briefly. (1x5=5M)

Now she's been dead nearly as many years

As that girl lived. And of this circumstance

There is nothing to say at all.

Its silence silences.

i) What is poet's reaction in the end?

a) She wants to write more and more about her mother

b) She doesn't want to speak more as she is sad

c) She wants to draw the picture of her mother

d) All of these

ii) Which poetic device has been used in 'Its silence silences'?

a) Personification

b) Simile

c) Alliteration

d) Oxymoron

iii) What is the mental state of the poetess in the end of the poem?

a) She is upset

b) She is overjoyed

c) She is ecstatic

d) All of these

iv) Name the poem and the poet of the poem.

v) Who is **that girl** in the second line?

Q6. Read the extract and answer the questions briefly. (1x5=5M)

She hobbled about the house in spotless white with one hand resting on her waist to balance her stoop and the other telling the beads of her rosary. Her silver locks were scattered untidily over her pale, puckered face, and her lips constantly moved in inaudible prayer. Yes, she was beautiful. She was like the winter landscape in the mountains, an expanse of pure white serenity breathing peace and contentment.

i) What does the narrator mean by 'Silver locks'?

a) Lock and Key

b) Grey Hair

c) Attire of Silver colour

d) None of these

ii) Which figure of speech has been used in 'Pale puckered face'?

- a) Simile
- b) Metaphor
- c) Alliteration
- d) Personification

iii) What does the word 'Hobble' mean?

- a) Walk quickly
- b) Limp
- c) Rush
- d) Hasten

iv) Who is she in the above extract?

v) Name the chapter and the author of the above extract.

Q7. Answer the following questions in about 30-40 words. (2X6=12M)

1. Why was the grandmother so disturbed when the narrator started going to the city School?
2. Describe the mental condition of the voyagers on 4th and 5th January?
3. Why does the poet get surprised when he gets an answer from the rain?(The Voice of the Rain)
4. To which tribe did Mourad and Aram belong? Which traits of the tribe are highlighted in the story 'The Summer of the Beautiful White Horse'?
5. Why was Aram delighted and frightened at the same time when he saw his cousin Mourad on a beautiful white horse?
6. The sea 'appears to have changed less' in comparison to the three girls who enjoyed the sea holiday. Comment.

6. Whose reign is remembered as the "age of peace"?

- a) . Augustus
- b) Tiberius
- c) Constantine
- d). Justinian

7. Roman Empire had many modern features. Which of the following statement(s) is/are correct to prove this?

- 1. In Roman Society nuclear family prevailed
 - 2. Woman enjoyed legal rights
 - 3. Slaves were an investment Choose the correct option:
- a) (1) and (2) only
 - b) (2) and (3) only
 - c) (1), (2) and (3)
 - d) (2) only

8.Directions: In the following question, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as:

Assertion (A): The legacy of Mesopotamia includes its tradition of time reckoning and time.

Reason (R). The Mesopotamians divided days into 24 hours and hour into 60 minutes.

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

9. Directions: In the following question, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as:

Assertion (A): Christianity became the official religion of Rome

Reason (R). Justianian declared Christianity to be the official religion of Rome.

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

10. River that determined the boundary of the Roman Empire in the North:

- a) Rhine
- b) Tigris and Euphrates
- c) Danube
- d) A and B both

11. The Roman silver coin, known as denarius, weighed _____ gm of pure silver.

- a) 2½
- b) 3½
- c) 4½
- d) 5½

12. What was Amphorae

- a) A type of army
- b) A type of container
- c) A type of administrator
- d) None of the above

SECTION-B

(1x3=3)

The Warka Head

This woman's head was sculpted in white marble at Uruk before 3000 BCE. The eyes and eyebrows would probably have taken lapis lazuli (blue) and shell (white) and bitumen (black) inlays, respectively. There is a groove along the top of the head, perhaps for an ornament. This is a world-famous piece of sculpture, admired for the delicate modelling of the woman's mouth, chin and cheeks. And it was modelled in a hard stone that could have been imported from a distance.

- (a) What is a Warka Head? (1)
- (b) In what manner were the eyes and eyebrows of the Warka Head completed? (1)
- (c) Why is the Warka Head admired all over the world? (1)

SECTION-C

Answer in 100-150 words.

(3x4=12)

- 14. What were the main features of the city of Mari
- 15. Why was slave breeding encouraged in the Roman Empire?
- 16. Explain the condition of slaves and workers in the Roman Empire.
- 17. Explain the development of writing in Mesopotamia on the basis of evidences.

SECTION – D

Answer the following questions in detail.

(6x3=18)

- 18. Explain the development of writing in Mesopotamia on the basis of evidences.
- 19. 'Roman army was a key institution of the Roman Empire'. Justify the statement
- 20. Explain the rules of family and marriage in Mesopotamia

SECTION-E

21.1 Point the following locations on map of Mesopotamia. (3)

- a) Mesopotamia b) Uruk c) Turkey

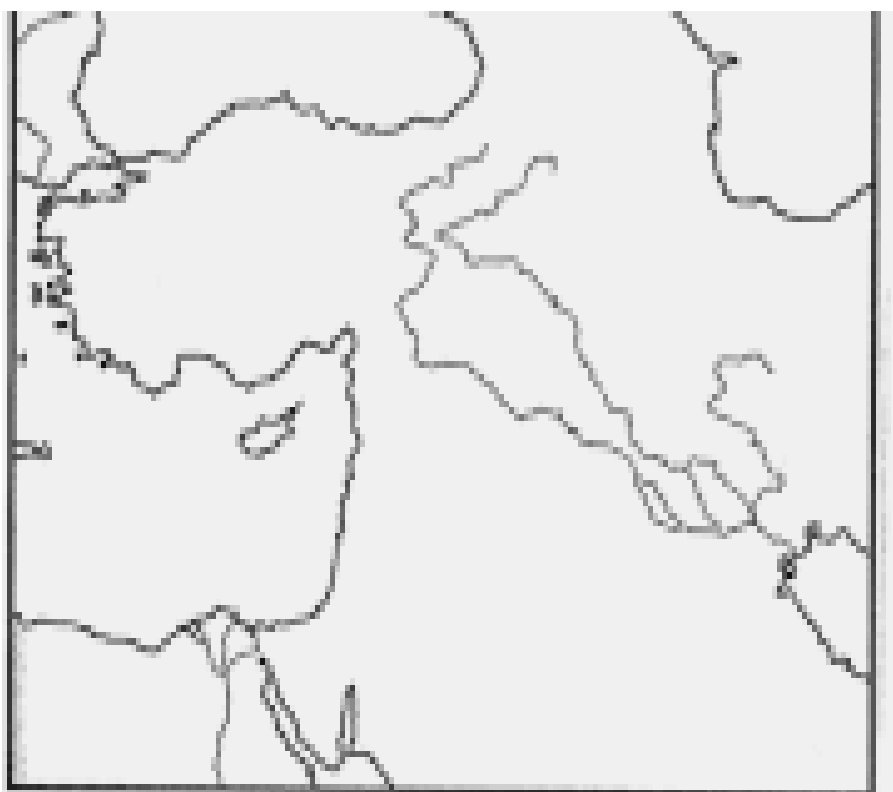
21.2 Locate the following locations on the map of West Asia. (2)

- a) Red Sea b) Persian Gulf

Map of West Asia



Map of Mesopotamia



ST PBN PUBLIC SCHOOL, GURUGRAM
SAMPLE PAPER UT - I (2024-25)
ECONOMICS(030)
Class – XI

NAME: _____

DATE: _____

Time: 2 hours

M.M. : 50

General Instructions:

1. This Question Paper contains **19** Questions.
2. This Question Paper contains 10 Questions of 1 Mark each.
3. This Question Paper contains Short Answer Type I Questions carrying **3 Marks** each to be answered in 60 to 80 words.
4. This Question Paper contains Short Answer Type II Questions carrying **4 Marks** each to be answered in 80 to 100 words.
5. This Question Paper contains Long Answer Type Questions carrying **6 Marks** each to be answered in 100 to 150 words.
6. Attempt all parts of the Questions together.
7. There is no overall choice. However, an internal choice is provided in few Questions.

SECTION A – MICRO ECONOMICS

- Q1. Give any two examples of Complementary goods. 1
- Q2. A Statement that does not offer any suggestion is called 1
a) Normative Statement
b) Positive Statement
c) Positive and Normative Statement
d) None of the above
- Q3. When Total Utility (TU) is maximum, Marginal utility of a good (MU) 1
a) increases
b) falls
c) equal to zero
d) negative
- Q4. Assertion (A) : A person tends to buy more or less of a commodity . 1
Reason (R) : Individual person's likes and dislikes tend to change with time.
a) Both Assertion (A) and Reason (R) are true and Reason (R) is correct explanation of Assertion (A)
b) Both Assertion (A) and Reason (R) are true but Reason (R) is not correct explanation of Assertion (A)
c) Assertion (A) is true but Reason (R) is false
d) Assertion (A) is false and Reason (R) is true
- Q5. Upward Movement along a demand curve is called _____ in demand. 1
- Q6. How is Movement and shift in demand different? Explain with relevant diagrams. 3
- Q7. Differentiate between : 4
i) Micro Economics and Macro Economics

ii) Positive Statements and Negative Statements

- Q8. a) When price of a good is ₹13 per unit, the consumer buys 11 units of that good. When price rises to ₹15 per unit, the consumer continues to buy 11 units. Calculate Price Elasticity of Demand. 4
- b) Price Elasticity of demand of Good X is (-2) and of good Y is (-3). Which of the two goods is more price elastic and why?

Q9. Explain the Law of Demand with a demand schedule and a demand curve. Explain the factors affecting demand. 6

OR

Explain the degrees of elasticity of demand.

SECTION B – STATISTICS

- Q10. In cloth business, profit earned in three years is ₹1,000, ₹2,000 and ₹3,000 and in the paper business profit earned is ₹3,000, ₹2,000 and ₹1,000. Both businesses earn the same average profit ₹2,000 and both have the same economic status. Cloth business is making profit and paper business is declining. Which limitation of business is highlighted above? 1
- a) Statistics of numerical facts only
b) Prone to misuse
c) Study of Aggregates only
d) Without reference result may prove wrong

Q11. Calculate the Arithmetic Mean of marks of 6 students as 50, 54, 56, 58, 59 and 60. 1

Q12. Assertion (A) : Statistical techniques are used to analyse economic problems of countries like poverty, price control etc. 1

Reason (R) : The policy of family planning can be made effective in controlling the population of the country.

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

Q13. Write two types of Sampling Methods. 1

Q14. Explain the role of an Enumerator in Pilot survey. 1

Q15. Explain the steps in statistical investigation. 3

OR

Explain the meaning of statistics both in singular sense and in plural sense.

Q16. Calculate Mean by Assumed mean method for height of 25 students 4

Height(in feet)	No. of students
6	4
5.5	7
5	8
4	3
6.5	3

Q17. Mean of 100 observations is found to be 40. At the time of computation two items were wrongly taken as 30 and 27 instead of 3 and 72. Find the correct Mean. 4

Q18. Calculate Airthmetic Mean by Step Deviation Method for the following data 6

Profit (₹)	No. of retail shops
0-10	12
10-20	18
20-30	27
30-40	20
40-50	17
50-60	6

Q19. i) Explain the types of statistical data. 3

ii) Explain the different statistical methods used to calculate data. 3

ST. PBN PUBLIC SCHOOL (SAMPLE PAPER)

UNIT TEST I
SUBJECT- POLITICAL SCIENCE
CLASS – XI

Time: 2 Hrs

MM.50

General Instructions:

- i. All questions are compulsory.
- ii. Question numbers 1-6 are multiple choice questions of one mark each.
- iii. Question numbers 7-10 are of 2 marks each. Answers to these questions should not exceed 50 words each.
- iv. Question numbers 11-14 are of 4 marks each. Answers to these questions should not exceed 100 words each.
- v. Question numbers 15-16 are passage, cartoon and map-based questions. Answer accordingly.
- vi. Question numbers 17-18 are of 6 marks each. Answers to these questions should not exceed 170 words.
- vii. There is an internal choice in 6 marks questions.

Q1. Which of the following is not a characteristic of Fundamental Rights ?

- a. It is quasi-federal
- b. It is a written constitution
- c. It establishes parliamentary supremacy
- d. Members of the Constituent Assembly were indirectly elected.

Q2. In how many paragraphs is the right to equality?

- a. Articles 14 to 18
- b. Articles 19 to 22
- c. Articles 29 to 32
- d. Articles 25 to 28

Q3. Match the following.

- | | |
|------------|-----------------|
| a. UK | Judicial Review |
| b. US | DPSP |
| c. Canada | Residual Powers |
| d. Ireland | Rule of Law |

Q4. What is politics?

- a. Art of Governing
- b. Teaches how to run the activities of government properly.
- c. Gives solution to the matters of administrative operation.

d. All of the above.

Q5. What is meant by Negative freedom?

- a. Freedom with restrictions
- b. Absence of restrictions
- c. Excess of restrictions
- d. All of the above.

Q6. Censorship is a restriction on

- a. Freedom of movement
- b. Freedom of religion
- c. Freedom of speech and expression
- d. Freedom to choose an occupation

SECTION -B

Q7. Why is Right to Constitutional remedies important?

Q8. How does the Indian Constitution limit the powers of the government?

Q9. What is meant by the rule of law?

Q10. What are the fundamental difference between Liberty and Freedom?

SECTION -C

Q11. Why Indian constitution framers adopted a parliamentary form of government and a federal structure?

Q12. How is Prohibition different from Certiorari?

Q13. What aspects of life do we study in political theory?

Q14. The Indian constitution is 'rigid and coordinating flexibility' Do you agree with this statement? explain

SECTION -D

Q15. Read the passage and answer the following questions.

The members of the constituent assembly placed a great emphasis on discussion and reasoned argument. They did not simply advance their own interests but gave principled reasons to other members for their positions. The very act of giving reasons to others makes you away from simply in narrow consideration of your own interest because you have to give reasons to others to make them along with your viewpoint. The voluminous debate in the constituent assembly, where each close of the Constitution was subjected to scrutiny and debate, is a tribute to public reason at best. These debates deserve to be memorialized as one of the most significant chapters in the history of constitution-making.

- a. What was the way of the Constituent Assembly?
- b. Do you think that the Constituent Assembly was representing all classes of society?
- c. What was the popularity of the Constituent Assembly?
- d. How were the differences resolved in the Constituent Assembly?

Q16. Read the following passage carefully and answer the following questions.

The advocates of positive freedom believe that a person can be independent only in the society and not outside the society, so he tries to make the society such that clear the way for the development of the person. On the other hand, positive freedom is concerned with the inviolable area of non-interference, not the conditions of society outside this area. Negative freedom would like to expand this small area of non-interference as much

as possible. However, in doing so, it will take care of the sustainability of the society. Generally, both types of liberties run concurrently and support each other, but it is possible that autocratic regimes try to justify their rule by resorting to positive libertarian arguments.

- A. What does positive freedom mean?
- B. What is the concept of negative freedom?
- C. According to the passage what has been argued in opposition to positive freedom?
- D. Do both freedoms go together?

Q17. Discuss the significance of incorporating the DPSP in the Indian constitution.

OR

Right to religious freedom is considered a symbol or basis of democracy. Prove the appropriate statement with logic.

Q18. What do rights mean? Why are they important? Discuss the various kinds of rights available today, giving illustrations from the Indian constitution.

OR

How was the Indian constitution formally made and discuss the composition of the constituent assembly?

ST. PBN PUBLIC SCHOOL, GURUGRAM
UNIT TEST - I
CLASS – XI
PHYSICAL EDUCATION
SAMPLE PAPER

Time: 2 Hours

MM: 50

General Instructions:-

- 1. All questions are compulsory.**
- 2. Questions 1-7 carry 1 mark each and are multiple choice questions.**
- 3. Questions 8-10 carry 2 marks each and their answers should not exceed 40-60 words.**
- 4. Questions 11-13 carry 3 marks each and their answers should not exceed 80-100 words.**
- 5. Questions 14-15 carry 4 marks each and their answers should not exceed 120-140 words.**
- 6. Questions 16-19 carry 5 marks each.**

1. In 393 A.D., which emperor banned Olympic games?

- | | |
|----------------|---------------------|
| (a) Augustus | (c) Claudius |
| (b) Theodosius | (d) Marcus Aurelius |

2. The headquarters of Fit India Movement is at

- | | |
|-------------|---------------|
| (a) Chennai | (c) Mumbai |
| (b) Kolkata | (d) New Delhi |

3. Who composed the music for the Olympic Anthem?

- | | |
|--------------------|-----------------|
| (a) Coubertin | (c) Thomas Bach |
| (b) Spiros Samaras | (d) Samaranch |

4. In which year, the Olympic anthem was adopted by IOC?

- | | |
|----------|----------|
| (a) 1928 | (c) 1996 |
| (b) 1958 | (d) 1904 |

5. The ancient Olympic games were initially:

- | | |
|-----------------|-----------------|
| (a) 3 Day event | (c) 1 Day event |
| (b) 2 Day event | (d) 5 Day event |

6. How many components are included in Khelo India Program?

- | | |
|--------|--------|
| (a) 10 | (c) 8 |
| (b) 12 | (d) 15 |

7. Olympic flame was first introduced in

- (a) 1896
- (b) 1928
- (c) 1956
- (d) 2008

8. Name some technological advancements in Sports.

9. Describe Logo of Fitness India Movement.

10. Explain the concept of Olympism.

11. What do you mean by Sports Journalism?

12. Discuss role of sensors in Improving Sports performance.

13. Discuss the National Olympic committees along with its functions.

14. Write a note on the Health Related Careers in Physical Education.

15. Mention the rules for competitions in Ancient Olympic games.

16. Where were the first khelo India school games held?

17. Elucidate in detail about International Sports Federations.

18. What do you mean by playing surface? What role does it play in Improving performance in Sports.

19. Case based questions:

Most students in a school did not think that PE has career opportunities. One day an international cricket star attended the school Annual Day function as chief guest. He spoke about his struggles and how he was transformed by an active career that resulted from taking physical education subject in school seriously. He also talked about starting his own coaching academy. He explained as to how there were a lot of good career options available in PE. This gave students a clear understanding of the various career options available in PE which only aroused their interest in the subject and most of them started taking PE seriously.

- (i). What career opportunities must have the cricketer talked about? (1)
- (ii). What are the possibilities for PE in media? (2)
- (iii). Besides teaching in a school, what options exist for becoming trainers in PE?(2)

St. PBN PUBLIC SCHOOL, GURUGRAM
UNIT TEST- I EXAMINATION
CLASS XI
COMPUTER SCIENCE
(SUBJECT CODE-083)
SAMPLE PAPER

Time: 2 Hours

M.M:50

GENERAL INSTRUCTIONS:

1. This question paper contains five sections, Section A to E.
2. All questions are compulsory.
3. Section A have 12 questions carrying 01 mark each.
4. Section B has 04 Very Short Answer type questions carrying 02 marks each.
5. Section C has 04 Short Answer type questions carrying 03 marks each.
6. Section D has 02 Long Answer type questions carrying 05 marks each.
7. Section E has 02 questions carrying 04 marks each.
8. 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 12 = 12)

1. What is the base of octal number system?

- | | |
|-------|--------|
| (a) 2 | (b) 10 |
| (c) 8 | (d) 16 |

2. Convert $(75)_8$ into decimal number

- | | |
|---------|--------|
| (a) 611 | (b) 17 |
| (c) 61 | (d) 32 |

3. Which of the following are the sub-units that make the CPU?

- | | |
|------------------|-------------------|
| (a) Control Unit | (b) ALU |
| (c) Both a & b | (d) None of these |

4. Storage of 1 KB means the following number of bytes:

- | | |
|----------|----------|
| (a) 2000 | (b) 1084 |
| (c) 1003 | (d) 1024 |

5. Identify the correct print() statement:

- | | |
|--------------------|--------------------|
| (a) print(Hello) | (b) print("Hello") |
| (c) print('Hello') | (d) print("Hello') |

6. _____ is the act of locating and fixing problems in software code that could lead to unexpected behavior or crashes. These errors are sometimes referred to as "bugs."

- | | |
|---------------|---------------------|
| (a) Algorithm | (b) Problem Solving |
|---------------|---------------------|

(c) Debugging

(d) All of these

7. The interactive interpreter of Python is termed as _____.

(a) Python shell

(b) Python script mode

(c) Python Editor mode

(d) Python command line

8. Identify the input device among the following choices:

(a) Touch Screen

(b) Speaker

(c) 3D Printer

(d) Display Monitor

9. Disk defragmenter is an example of :

(a) Application software

(b) System software

(c) Utility software

(d) Language processors

10. _____ is the process of identifying a problem, developing an algorithm for the identified problem and finally implementing the algorithm to develop a computer program.

(a) Problem Solving

(b) Problem Addressing

(c) Problem Analysis

(d) None of these

Q11 and 12 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

11. **Assertion (A):** Flowchart is the pictorial representation of a task.

Reason (R): Flowchart is used to represent how a program works.

12. **Assertion (A):** Memory unit is used as a storage unit for program as well as data.

Reason (R): Computer Memory cannot be directly accessed by the CPU.

SECTION B

(2x 4 = 8)

13. Identify the category of the following software

(i) Compiler

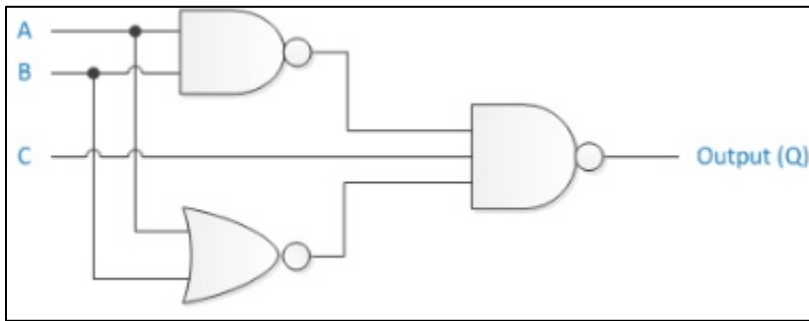
(ii) Assembler

(iii) Ubuntu

(iv) Text Editor

(2)

14. Obtain the Boolean expression for the logic circuit shown below and also write its truth table:



(2)

15. (i) Find the dual of the following expressions :

- $A.B + A.C$
- $xy' + x'z$

(ii) Verify with the help of truth table that $(A+B)' = A' . B'$

(1+1)

16. (i) Convert $(705)_8$ to binary number

(ii) Convert $(3A5)_{16}$ to decimal number

OR

Draw a logic circuit of $P = A + B . C' + A' . C'$

(2)

SECTION C

(3x 4 = 12)

17. (i) Name the software required to make a computer functional. Write down its two primary services.

(ii) What is the need of secondary memory?

(1+2)

18. Write a pseudo-code to calculate and display Area and Perimeter of a rectangle

OR

Write pseudocode that read two numbers and divide one by another and display the quotient.

(3)

19. Convert the following :

(i) $(889)_{10} = (?)_8$

(ii) $(220)_8 = (?)_2$

(iii) $(789)_{10} = (?)_{16}$

(1+1+1)

20. Why is primary memory termed as 'destructive write' memory but 'non-destructive read' memory?

OR

Differentiate between System software and Application software. (3)

SECTION D

(5x 2 = 10)

21. Railway Booking and Lodging is a travel agency that books railway tickets for its customers. They ask the user to furnish all the details about the date of journey, destination, preferred time of journey and other required relevant details. They need to computerize all their processing and working methodology.

You being a software analyst, develop a solution by decomposing the entire problem and design a suitable railway ticket reservation system using concept of decomposition. (5)

22. (i) Write an algorithm to find the greatest among two different numbers entered by the user.

(ii) Suppose you are collecting money for something. You need ₹ 200 in all. You ask your parents, uncles and aunts as well as grandparents. Different people may give either ₹ 10, ₹ 20 or even ₹ 50. You will collect the total becomes 200. Write the algorithm.

(2+3)

OR

(i) Write down the type of memory needed to do the following:

- a) To store data permanently.
- b) To store the instructions which cannot be overwritten.
- c) To execute the program.

(ii) Explain briefly the functions of Operating System. (3+2)

SECTION E

(4 x 2 = 8)

23. A computer is programmable machine. The two principal characteristics of a computer are: It responds to a specific set of instructions in a well-defined manner, and it can execute a pre-recorded list of instructions (a program). Modern computers are electronic and digital. The actual machinery wires, transistors and circuits are called hardware, the instructions and data are called software.

(i) Which of the following is the correct definition of Computer?

- (a) Computer is a machine or device that can be programmed to perform arithmetical or logic operation sequences automatically.
- (b) Computer understands only binary language which is written in 0s & 1s.
- (c) Computer is a programmable electronic device that stores, retrieves and processes the data.
- (d) All of these

- (ii) Which of the following is the brain of the computer?
- | | |
|-------------------------------|------------------|
| (a) Central Processing Unit | (b) Memory |
| (c) Arithmetic and Logic Unit | (d) Control Unit |
- (iii) Which of the following is not a characteristics of a computer?
- | | |
|-----------------|--------------|
| (a) Versatility | (b) Accuracy |
| (c) Diligence | (d) I.Q. |
- (iv) Which of the following is designed to control the operations of a computer?
- | | |
|---------------------|--------------------------|
| (a) User | (b) Application software |
| (c) System software | (d) Utility software |
- (1+1+1+1)

24.

- (i) Draw a circuit diagram corresponding to the Boolean expression
 $(A + B)(B + C)$
- (ii) What will be the output of given Boolean expression $D = N(P + C)$, where $N=1, P=0$ & $C=1$
- (iii) Write the truth table of $(X'+Y).Z + W'$
- (iv) Draw a circuit diagram corresponding to the Boolean expression
 $Y = (BC + A)(A' + C)$
- (1+1+1+1)