

SECTION A — (Reading)

(12)

I. Read the passage given below and answer the questions that follow:

1. People travelling long distances frequently have to decide whether they would prefer to go by land, sea or air. Hardly anyone can positively enjoy sitting in a train for more than a few hours. Train compartments soon get cramped and stuffy. It is almost impossible to take your mind off the journey. Reading is only a partial solution, for the monotonous rhythm of the wheels clicking on the rails soon lulls you to sleep. During the day, sleep comes in snatches. At night when you really wish to go to sleep, you rarely manage to do so. If you are lucky enough to get a berth, you spend half the night staring at the small blue light in the ceiling, or fumbling to find your passport when you cross a frontier. Inevitably you arrive at your destination almost exhausted.

2. Long car journeys are even less pleasant, for it is quite impossible even to read. On motor-ways you can at least travel fairly safely at high speeds, but more often than not, the greater part of the journey is spent on narrow, bumpy roads which are crowded with traffic. By comparison, trips by sea offer a great variety of civilized comforts. You can stretch your legs on the spacious decks, play games, swim, meet interesting people and enjoy good food-always assuming, of course, that the sea is calm. If it is not, and you are likely to get sea-sick, no form of transport could be worse. Even if you travel in ideal weather, sea-journeys take a long time. Relatively few people are prepared to sacrifice up to a third of their holidays for the pleasure of travelling on a ship.

3. Aeroplanes have the reputation of being dangerous and even hardened travellers are intimidated by them. They also have the great disadvantage of being the most expensive form of transport. But nothing can match them for speed and comfort. Travelling at a height of 30,000 feet, far above the clouds, and at over 500 miles an hour is an experience. You do not have to devise ways of taking your mind off the journey, for an aeroplane gets you to your destination rapidly. For a few hours, you settle back in a deep armchair to enjoy the flight.

4. The real escapist can watch a free film show and sip a hot or cold drink on some services. But even when such refreshments are not available, there is plenty to keep you occupied. An aeroplane offers you an unusual breath taking view of the world. You soar effortlessly over high mountains and deep valleys. You really see the shape of the land. If the landscape is hidden from view, you can enjoy the extraordinary sight of unbroken clouds, plains that stretch out for miles before you, while the sun shines brilliantly in clear sky. The journey is so smooth that there is nothing to prevent you from reading or sleeping. However you decide to spend your time, one thing is certain. You will arrive at your destination fresh and uncrumbled. You will not have to spend the next few days recovering from a long and arduous journey.

Answer the following questions briefly in your own words:

- A) (i) Why is it difficult to read on a train in long distance journey? 2
Give two reasons.
- (ii) What are the two disadvantages of travelling by sea? 2
- (iii) What are the two disadvantages of travelling by air? 2
- (iv) What are the pleasures of air-flight, according to the writer? 2

(v) Why does the writer dislike long car journeys?

2

(b) Find words in the above passage which convey a similar meaning as the following: 2

- (i) feel around uncertainly (Para-1)
- (ii) difficult and tiring (Para-4)

Section: B (Writing Skills)

(10)

II. You are Divya, living at 18 , Durga Marg, Jaipur, Rajasthan. Write a letter to M/s Gautam Booksellers ,Janakpuri, Delhi complaining that the books sent were not those that you ordered. (100 – 120 words)

OR

You are Amit / Preeti living at C-207 , Shastri Nagar , Meerut. Street lights in the area have not been working for the last six months leading to accidents and a rise in anti-social activities. Write a letter to the General Manager of the Electrical Corporation of your city complaining him about this problem. (120-150 words)

SECTION C — (Literature)

(28)

III. Read the extract given below and answer the questions that follow: (4)

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) Whom does 'she' stand for? 1
- ii) What does 'Its silence' mean in the poem? 1

iii) Explain ‘ And of this circumstance’.

2

IV. Answer Any Four of the following questions in about 30 – 40 words each. (3x4 = 12)

- (i) Why was young Khushwant’s grandmother disturbed when he started going to the city school ?
- (ii) How would his grandmother keep herself busy when Khuswant Singh went abroad?
- (iii) Knowledge of which subjects was given in the city school where he started learning?
- (iv) Whose horse was stolen and with whom was it?
- (v) Why must Khushore be always saying, ‘pay no attention to it’?
- (vi) What was Aram’s wish? How was it fulfilled?

V. Answer Any Two of the following questions in about 100-120 words each.

(6x2 = 12)

1. Develop the character of Mourad in your own words.
 2. What impressions do you get of Khuswant Singh’s grandmother?
 3. Describe the developing gap and lack communication between Khuswant Singh and his grandmother.
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Atomic Energy Central School No.4, Rawatbhata

Periodic Test-1 (2018-19)

Time – 1 & Half Hrs

Class-XI (PHYSICS)

M.M.-35

Note: 1) All questions are compulsory.

Q.1] What is percentage error in volume of a sphere, when error in measuring its radius is 2% 1M

Q.2]What type of quantity is Avogadro’s number? Why? 1M

Q.3]Name the largest and smallest practical unit of energy. 1M

Q.4] What is the dimensional formula for rate of flow and critical velocity? 2M

Q.5]In Vander Walls equation $(P + \frac{a}{V^2})(V - b) = RT$. What are the dimensions of a & b? Here P is pressure, V is volume, T is temperature & R is constant. 2M

Q.6] Define accuracy and precision 2M

Q.7] Define error, different sources of systematic error & how random error can be minimized? 3M

Q.8] Each side of cube is measured to be 7.203m. What are the total surface area and volume of the cube to appropriate significant figure? 3M

Q.9] The frequency (ν) of an oscillating drop may depend upon radius (r) of the drop, density (ρ) of liquid and the surface tension (S) of the liquid. Deduce the formula dimensionally. 3M

Q.10] The thickness of a sphere as measured by the vernier caliper was found to be 1.328, 1.330, 1.336, 1.326, 1.240, 1.445 & 1.242cm Calculate: (i) fractional error (ii) percentage error. 3M

Q.11] Which of the following length measured is more accurate and why?

(i) 4.00 cm (ii) 0.004 mm (iii) 40.00cm 3M

Q.12]two resistors of resistances $R_1 = 100 \pm 3 \Omega$ and $R_2 = 200 \pm 4 \Omega$ are connected

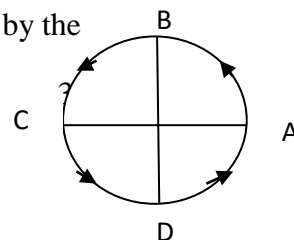
a) in series b) parallel combination.

Find the % age error in each case. 3M

Q.13 A particle moves along a circle of radius R. It starts from A and moves in B

in anticlockwise direction. Calculate the distance & displacement travelled by the

particle (a) from A to B, (b) from A to D & (c) from A to A.



Q.14] Explain principal of homogeneity of dimensions. What are its uses? lustrate by giving one example of each. 5M

Note: Answer all the questions. Marks for each question given in front of them.

1. Name the drug which is used as anticancer agent. (1)
2. Name the last natural element occurs on earth crust. (1)
3. Calculate the percentage of sodium and sulphur in sodium sulphate.
Atomic mass Na=23, S = 32 and O = 16 (2)
4. State and explain the law of multiple proportions. (2)
5. i) What is the mass of one hydrogen atom in gram?
ii) Define mole. What is the volume of 11g of carbon dioxide at STP? (1+2)
6. i) What is limiting reagent in a chemical reaction?
ii) 3g H₂ reacts with 20g of O₂ to give water. Identify the limiting reagent in this reaction. What mass of water will form in this reaction? (1+2)
7. i) Define molarity. Write its mathematical relation.
ii) Density of 3M NaCl solution is 1.25gcm⁻³. Calculate its molality. (1+2)
8. i) What is empirical formula?
ii) An organic compound contains 92.31% carbon and 7.69% hydrogen. Calculate its empirical and molecular formula. Molecular mass of the compound is 78g mol⁻¹. (1+2)
9. Explain photoelectric effect. What is its significance? What is work function energy in this? (3)
10. i) What is de Broglie relation? What is its significance?
ii) What is uncertainty principle? Write its mathematical relation. What is uncertain in this relation? (1+2)
11. Define the following terms:
a) mole fraction b) isotones c) Bohr's radius (3)
12. Write main points of Dalton's atomic theory. What were its limitations? (3)
13. i) Write the postulates of Bohr's atomic model.
ii) What is the wave length of radiation emitted when an electron undergoes transition from fourth energy level to second energy level? (2+3)

Atomic Energy Central School No.4 Rawatbhata

Unit test- I (2018-19)

Time : 1:30 hrs

Class- XI, Mathematics

M.M: 50

Section – A

1x4

1. If a set A has 5 elements, how many elements does $P(A)$ have?
2. If A and B are two sets having 3 and 6 elements respectively. Write the minimum number of elements that $A \cup B$ can have.
3. The Cartesian product $A \times A$ has 9 elements among which are found $(-1,0)$ and $(0,-1)$. Find the set A and the remaining elements of $A \times A$.
4. If $A = \{1,2,3\}$ & $B = \{2,4\}$ find $(A \times B) \cap (B \times A)$.

Section – B

2x6

5. If $A = \{x : x = 3n, n \in Z\}$ and $B = \{x : x = 4n, n \in Z\}$, then find $A \cap B$.
6. If A and B are any two sets, then, prove that $A - B = A \cap B'$.
7. Let $A = \{1,2,3\}$ and $B = \{x : x \in N, x \text{ is prime number less than } 5\}$, find $A \times B$ and $B \times A$.
8. Express $A = \{(a,b) : 2a+b = 5, a,b \in W\}$ as the set of ordered pairs.
9. If $A = \{1,2,3,5\}$ and $B = \{4,6,9\}$. Define a relation R from A to B by $R = \{(x,y) : \text{the difference between } x \text{ and } y \text{ is odd, } x \in A, y \in B\}$. Write R in roster form.
10. Is $g = \{(1,1),(2,3),(3,5),(4,7)\}$ a function? If this is described by the formula, $g(x) = \alpha x + \beta$, then what values should be assigned to α and β ?

Section – C

4x4

11. If $U = \{1,2,3,4,5,6,7,8,9\}$ $A = \{2,4,6,8\}$ and $B = \{2,3,5,7\}$ verify that
(i) $(A \cup B)' = A' \cap B'$ (ii) $(A \cap B)' = A' \cup B'$
12. Let A & B be sets. If $A \cap X = B \cap X = \emptyset$ and $A \cup X = B \cup X$ for some set X, show that $A=B$.

Or

Let A,B and C be the sets such that $A \cup B = A \cup C$ & $A \cap B = A \cap C$ show that $B=C$.

13. If $f(x) = \sqrt{x}$ and $g(x) = x$ be two functions define in the domain $[0,\infty)$ then find the value of
(i) $(f+g)(x)$ (ii) $(f-g)(x)$ (iii) $(fg)(x)$ (iv) $\left(\frac{f}{g}\right)(x)$

Or

Let $A = \{1,2,3,4,6\}$ and R be the relation on A defined by

$R = \{(a,b) : a,b \in A \text{ and } b \text{ is exactly divisible by } a\}$

- (i) Write R in roaster form.
- (ii) Find the domain and range of R

14. Draw appropriate Venn diagram for

- (i) $(A \cap B) \cup (A \cap C)$
- (ii) $A' \cap B'$

Section – D

6x3

15. There are 200 individuals with a skin disorder 120 has been exposed to chemical C_1 , 50 to chemical C_2 and 30 to both C_1 & C_2 . Find the number of individuals exposed to

- (i) Chemical C_1 but not C_2
- (ii) Chemical C_2 but not C_1
- (iii) Chemical C_1 or C_2

16. (i) for all sets A, B and C , show that

$$(A-B) \cap (A-C) = A - (B \cup C)$$

(ii) If $P(A) = P(B)$ then show $A=B$

Or

If A & B are sub sets of universal set U , then show that,

- (i) $A \subset A \cup B$
- (ii) $A \subset B \Rightarrow A \cup B = B$
- (iii) $(A \cap B) \subset A$

17. (a) Find the range of following functions

(i) $f(x) = 1+3\cos x$

(ii) $f(x) = 1-|x - 2|$

(b) Let $A=\{9,10,11,12,13\}$ and let $f: A \rightarrow N$ be defined by $f(n) =$ the highest prime factor of n

find the range of f .

Atomic Energy Central School No.4, Rawatbhata

Unit Test-1 (2018-19)

Time – 1 & Half Hrs

Class-XI (Biology)

M.M.- 35

1. What does ICZN stands for? 1
2. Name two organisms that do not reproduce at all. 1
3. In which kingdom of five kingdom classification nuclear membrane is not present?
1
4. Gamete formation and fusion are absent in bacteria. How do then bacteria undergo sexual reproduction? 1
5. Petunia and Datura are placed in which family? 1
6. What are mesosomes and its use in bacterial cell? 2
7. List any two differences between anabolism and catabolism. 2
8. What are the characteristics of class-Ascomycetes? 2
9. Which are the basic processes in taxonomy? 2
10. What do you mean by alternation of generation? 2
11. How are viroids different from viruses? 3
12. What do the term phycobiont and mycobiont signify? 3
13. (i) What is the nature of cell-wall in diatoms? 1
(ii) Plants are autotrophic. Can you think of some plants are partially heterotrophic?
2
14. Define the following term:
(i) Phylum (ii) family (iii) Genus 3
15. Illustrate the taxonomical hierarchy with suitable examples of plant or animal. 3
16. (i) What do you mean by taxonomy? Write its three different steps used in diversity. 2
(ii) What do you mean by Binomial nomenclature? Write its rules. 3

OR

- (i) Describe briefly the four major groups of Protozoan.
 - (ii) State two economically important uses of heterotrophic bacteria.
-

Atomic Energy Central School No-4, Rawatbhata

Unit Test-1 (208-19)

Time: 3 Hours

Class: XI, COMPUTER SCIENCE (083)

MM: 35

Q.N.- Answer the following questions:

1.
 - a) Name the inventions, which helped in the design and development of the modern digital computer system. [1]
 - b) Explain the working of different functional units of a computer system, also give names of the devices used in such units. [5]
 - c) Compare Hardware and Software? Give examples
 - d) Draw block diagram of digital computer system.
 - e) Write a short note on 4th gen computers? [2]
 - f) Fill in the blanks: [2]
 1. _____ invents stored program architecture. [2]
 2. _____ invents Analytical Machine. [2]
 3. _____ Gen Computers uses RAM Chip Memory first time. [3]
 4. _____ is faster than Mainframe Computers.
 5. _____ is responsible to calculate data in CPU.
 6. Liveware is _____.
2. WAP to enter cost of a Pen and a Pencils and calculate the total cost of 5 pens and 4 pencils. [5]
Display cost of Pens and Pencils along with the total cost.

OR

WAP in C++ to enter the Principal Amount, Rate of Interest and time and calculate the simple interest. Display at output with proper message.
3.
 - a) Convert the 3.4GB into bits. [1]
 - b) Give classification of digital computer. [2]
 - c) Name some devices for Input and Output Units? [2]
 - d) Which technologies were used in the first four generations of computers? [2]
7. Convert the following numbers into another bases: [8]
 - a) $(11100110)_2 = ()_{10}$
 - b) $(546)_8 = ()_{10}$
 - c) $(3EC)_{16} = ()_8$
 - d) $(45.69)_{10} = ()_{16}$

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Instructions:

- Question paper consists of 13 questions. All questions are compulsory.
- 1 mark questions must be answered in approximately 10-20 words.
- 3 marks questions must be answered in approximately 30-50 words.
- 5 marks questions must be answered in approximately 75-100 words.

QUESTIONS

- | | |
|--|---|
| 1. Define Physical Education. | 1 |
| 2. Where is the Head Quarter of IOC? | 1 |
| 3. Write full form of IOA and when it was form. | 1 |
| 4. When and Where Ancient Olympic games started? | 1 |
| 5. Who is known as the father of Olympics? | 1 |
| 6. Describe any two Sports awards. | 3 |
| 7. Write down the aim and objectives of physical education. | 3 |
| 8. Explain the components of Health related fitness. | 3 |
| 9. Describe Physical Fitness and write its components. | 3 |
| 10. Write down about scope of careers in physical education. | 3 |
| 11. Describe the Soft skills required for different career. | 5 |
| 12. Explain the importance of Physical fitness. | 5 |
| 13. Write down in detail about Modern Olympics games. | 5 |

परमाणु ऊर्जा केन्द्रीय विद्यालय क्र. 4 रावतभाटा

प्रथम इकाई परीक्षा 2018-2019

समय - 1.30 घंटे

कक्षा ग्यारहवीं हिंदी (केन्द्रिक)

पूर्णांक: 50

प्र० १ निम्नलिखित गद्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर दीजिए।

ईश्वर सच्चिदानंद स्वरूप है तथा उसकी सर्वोत्कृष्ट रचना है – मानव। कण-कण में व्याप्त होने के साथ ही वह सर्वाधिक निकट हमारे अंदर स्थित है, फिर भी मानव हताश, निराश, दुखी तथा अशांत है। कारण है ईश्वरीय ज्ञान का अभाव। प्रश्न है उसे कैसे जाना जाए? ईश्वर से मिलन का सीधा सरल तरीका है – ध्यान। ध्यान सभी धर्मों का सार तथा सभी संतों एवं महापुरुषों द्वारा अपनाया गया मार्ग है। ध्यान के महत्व को समझे तथा किए बिना कोई भी व्यक्ति धार्मिक तथा अध्यात्मवादी नहीं हो सकता, क्योंकि ध्यान से चित्त का रूपांतरण होता है। पारलौकिक के साथ-साथ लौकिक रूप से भी ध्यान मानवोपयोगी है, क्योंकि शारीरिक व्याधियों के मूल हैं – मन के विकार। इस साधना से श्वासों की गति नियमित होती है, जिससे व्याधिकारक चंचल मन शांत होता है और अनेक प्रकार की व्याधियों का शमन होता है। ध्यान से मस्तिष्क की क्रियाशीलता बढ़ती है, बुद्धि कुशाग्र होती है तथा समय-समय पर आने वाले प्रश्नों की समस्याओं का समाधान आंतरिक शक्तियों से होता है। ध्यान परमानंद का झरना है। साधक के ध्यानस्थ होने पर मस्तिष्क में तरंगें उत्पन्न होती हैं जो शांति तथा आनंद का कारण है, किन्तु इस हेतु मन का शांत होना आवश्यक है। ध्यान की प्रक्रिया सरल है, किन्तु आवश्यकता है इसे जानने की। तत्वदष्टा सदगुरु से जानकार नित्यप्रति अभ्यास करना चाहिए। यह साधना शारीरिक, मानसिक एवं बौद्धिक विकारों को दूर कर सुख, समृद्धि, दीर्घायु तथा आनंद प्रदायक है। स्वयं के अलावा परिवार एवं विश्व में शांति व मंगल-भावना हेतु भी साधना आवश्यक है।

- क) उपरोक्त गद्यांश का उपयुक्त शीर्षक दीजिए। 1
- ख) मानव हताश क्यों है? 1
- ग) ध्यान मानव के लिए उपयोगी क्यों है? 1
- घ) ईश्वर की सर्वोत्कृष्ट रचना कौन सी है और क्यों? 1
- ङ) ध्यान से मस्तिष्क और बुद्धि पर क्या प्रभाव पड़ता है? 1
- च) परिवार और विश्व के लिए क्या आवश्यक है? 1
- छ) ईश्वर से मिलन सीधा तरीका ध्यान कैसे है? 1
- ज) समस्तपदों का विग्रह कीजिए – 2
- कार्यकुशलता, महापुरुष
- झ) संधिविच्छेद कीजिए - 1
- परमात्मा, सर्वाधिक

प्र० 2 निम्नलिखित पद्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर लिखिए।

हम तौ एक एक करि जानां

दोइ कहैं तिनहीं कौं दोजग जिन नाहिंन पहिचानां ॥

एकै पवन एक ही पानीं एकै जोति समानां ।
 एकै खाक गढे सब भांडै एकै कोहरां सानां ॥
 जैसे बाढी काष्ट की काटै अगिनि न काटै कोई ।
 सब घटि अंतरि तूँही व्यापक धरे सरूपै सोई ॥

- क) कवि कबीर ने ईश्वर की एकता किस प्रकार सिद्ध की है ? 2
 ख) संसार नश्वर है पर आत्मा अमर है इस बात को किस उदाहरण से सिद्ध किया गया है? 2
 ग) मानव शरीर का निर्माण किन पाँच तत्वों से हुआ है ? 1
 घ) कबीर के अनुसार नरक के भागीदार कौन हैं ? 1
 प्र० 3 निम्नलिखित गद्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर लिखिए ।

नौकरी में ओहदे की ओर ध्यान मत देना , यह तो पीर का मजार है | निगाह चढ़ावे और चादर पर रखनी चाहिए| ऐसा काम हूँढना जहाँ कुछ ऊपरी आय हो | मासिक वेतन तो पूर्णमासी का चाँद है जो एक दिन दिखाई देता है और घटते-घटते लुप्त हो जाता है |ऊपरी आय बहता हुआ खोत है जिससे सदैव प्यास बुझती है | वेतन मनुष्य देता है ,इसी से उसमे वृद्धि नहीं होती ऊपरी आमदनी ईश्वर देता है इसी से उसकी बरकत होती है .तुम स्वयं विद्वान हो, तुम्हें क्या समझाऊँ |

- क) ओहदे को 'पीर का मजार ' कहने में क्या व्यंग्य है ? 2
 ख) चादर और चढ़ावे पर नजर रखने का क्या आशय है ? 2
 ग) मासिक वेतन को पूर्णमासी का चाँद क्यों कहा ? 2

प्र० 4 निम्नलिखित प्रश्नों के उत्तर लिखिए |

- क) "नमक का दारोगा" कहानी में पंडित अलोपीदीन के व्यक्तित्वके कौन से दो पहलू उभर कर आते हैं ? 3
 ख) मियाँ नसीरुद्दीन को नानबाइयों का मसीहा क्यों कहा गया है ? 3

प्र० 5 निम्नलिखित प्रश्नों के उत्तर लिखिए |

- क) लोग मीरा को बाबरी क्यों कहते हैं ? 2
 ख) कबीर ने ऐसा क्यों कहा कि संसार बौरा गया है ? 2

प्र० 6 आज की तनाव भरी दिनचर्या' अथवा 'दूषित आहार पर चिंता प्रकट करते हुए 'एक फीचर लिखिए । 5

प्र० 7 सड़कों की दुर्दशा पर खेद और चिंता प्रकट करते हुए नगरपालिका अध्यक्ष को पत्र लिखिए । 5

अथवा

किसी दैनिक पत्र के संपादक को एक पत्र लिखिए , जिसमें बिजली के संकट से उत्पन्न कठिनाइयों का वर्णन किया गया हो |

- प्र० 8 क) लेखक ने लता की गायकी की किन विशेषताओं को उजागर किया है ?आपको लता की गायकी में कौन सी विशेषताएँ नजर आती हैं, उदाहरण सहित बताएँ । 4
 ख) शास्त्रीय एवं चित्रपट संगीत में क्या अंतर है ? 4
