



# Monthly Progressive Test

Class: VIII

Subject: PCMB



Test Booklet No.: MPT09

Test Date: 

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Time: 120 mins

Full Marks: 200

## Important Instructions :

1. The Test is of 120 mins duration and the Test Booklet contains 100 multiple choice questions of single correct option only. There are four sections with four subjects. You have to attempt all 100 questions (Candidates are advised to read all 100 questions). Questions 1 to 25 contain Physics, Questions 26 to 50 contain Chemistry, Questions 51 to 75 contain Mathematics, Questions 76 to 100 contain Biology.
2. Each question carries 2 marks. For each correct response, the candidate will get 2 marks. There is no negative mark for wrong response. The maximum mark is 200.
3. Use Blue / Black Ball point Pen only for writing particulars marking responses on Answer Sheet.
4. Rough work is to be done in the space provided for this purpose in the Test Booklet only.
5. On completion of the test, the candidate must handover the Answer Sheet to the invigilator before leaving the Room / Hall. The candidates are allowed to take away this Test Booklet with them.
6. The CODE for this Booklet is Off Line 

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7. The candidates should ensure that the Answer Sheet is not folded. Do not make any stray marks on the Answer Sheet. Do not write your UID No. anywhere else except in the specified space. Use of white fluid for correction is NOT permissible on the Answer Sheet. **Do not scibble or write on or beyond discrete bars of OMR Sheet at both sides.**
8. Each candidate must show on-demand his/her Registration document to the Invigilator.
9. No candidate, without special permission of the Centre Superintendent or Invigilator, would leave his/her seat.
10. Use of Electronic Calculator/Cellphone is prohibited.
11. The candidates are governed by all Rules and Regulations of the examination with regard to their conduct in the Examination Hall. All cases of unfair means will be dealt with as per Rules and Regulations of this examination.
12. No part of the Test Booklet and Answer Sheet shall be detached under any circumstances.
13. There is no scope for altering response mark in Answer Sheet.

## **Space For Rough Works**

## Physics

1. To lift water from a well we have to apply a type of force on the rope. The type of force is  
 (A) Pull                                      (B) Push                                      (C) Some times pull                      (D) Non-contact force
2. A charge body  
 (A) Cannot attract an uncharged body                      (B) Can attract an uncharged body  
 (C) Can repel oppositely charged body                      (D) It can neither attract nor repel another charged body
3. The earth attracts everything  
 (A) Towards its surface                      (B) Towards its centre  
 (C) Sometimes towards its centre                      (D) Towards sky.
4. Two persons are applying forces on two opposite sides of a moving cart. The cart still moves with the same speed in same direction. Then  
 (A) Both the forces are of equal magnitudes                      (B) Both the forces applied in the opposite directions.  
 (C) Both (A) and (B) are correct                      (D) None of the above
5. Two thermocol balls held close to each other move towards each other, when they are released.  
 (A) The responsible force is electrostatic force                      (B) The balls have opposite charges  
 (C) They move towards due to attraction                      (D) All the above are correct.
6. The air exerts pressure on the walls of the container it is filled into.  
 (A) False                                      (B) True  
 (C) Sometimes true                                      (D) We can't say as data is insufficient.
7. If we are swimming then  
 (A) The deeper we dive, the less we feel the pressure on us  
 (B) The pressure remains same at all depths.  
 (C) The deeper we dive, we feel the more pressure on us.  
 (D) Both (B) and (C) are correct.
8. A device is used to measure the changes in pressure in fluids. The name of device is  
 (A) Stethoscope                      (B) Periscope                      (C) Electroscope                      (D) Manometer

### Assertion-Reason type Questions (9):

**Direction :** A statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option.

- A. Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).
  - B. Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A).
  - C. Assertion (A) is true but reason (R) is false.
  - D. Assertion (A) is false but reason (R) is true.
9. **Assertion (A) :** As altitude increases, the air becomes less dense.  
**Reason (R) :** At a high altitude, the smaller amount of air above that altitude.
- (A) A                                      (B) B                                      (C) C                                      (D) D

10. Sucking a liquid from the air tight container is (no air inside the container)
- (A) Impossible (B) Possible  
(C) sometimes possible (D) We require more data to decide.
11. If we rub the two rough surfaces of two sheets of sand paper, then the resistance that is felt is
- (A) pull force (B) push force (C) gravity force (D) frictional force
12. Spring balance is a device used for measuring the
- (A) density (B) volume (C) mass (D) force
13. Select the correct statement
- (A) More the contact area, more is the friction (B) More the contact area, less is the friction.  
(C) less the contact area, less the friction (D) friction is independent of contact area

#### Assertion-Reason type Questions (14):

**Direction :** A statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option.

- A. Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).  
B. Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A).  
C. Assertion (A) is true but reason (R) is false.  
D. Assertion (A) is false but reason (R) is true.
14. **Assertion (A) :** When we place book over book than a single book on the rough study table, we have to put extra effort to move the books along the table.  
**Reason (R) :** More the weight of the object, more will be the force by which surfaces are pressed together and hence the greater will be the friction offered.
- (A) A (B) B (C) C (D) D
15. The speed of objects traveling through air and water gets reduced by
- (A) rolling friction (B) Fluid friction (C) gravity (D) electrostatic repulsion
16. Unwanted, unpleasant and loud sounds (in short duration) are called
- (A) musical (B) pitch (C) quality (D) noise
17. High frequency sound is
- (A) high pitch sound (B) Shrill sound  
(C) both (A) and (B) are correct (D) low pitch
18. Loudness depends on the
- (A) Amplitude of the vibrating body (B) change in frequency of sound  
(C) sensitivity on the ear (D) Both (A) and (C) are correct.
19. To distinguish between musical notes emitted by different musical instruments or voices even though they have the same pitch and loudness is called.
- (A) Beat (B) interference (C) polarization (D) Quality

#### Assertion-Reason type Questions (20):

**Direction :** A statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option.

- A. Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

- B. Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A).  
 C. Assertion (A) is true but reason (R) is false.  
 D. Assertion (A) is false but reason (R) is true.

20. **Assertion (A)** : Sound produced by oscillating simple pendulum cannot be heard by our ears.

**Reason (R)** : The frequency of a simple pendulum is very low.

- Ⓐ A                                      Ⓑ B                                      Ⓒ C                                      Ⓓ D

21. We measure the earthquake wave by an instrument called

- Ⓐ seismograph                      Ⓑ tuning fork                      Ⓒ physical pendulum                      Ⓓ spring balance

22. When a glass rod is rubbed with a piece of silk cloth, the silk cloth

- Ⓐ becomes positively charged                      Ⓑ becomes negatively charged  
 Ⓒ becomes neutral                      Ⓓ cold

#### Assertion-Reason type Questions (23) :

**Direction** : A statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option.

- A. Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).  
 B. Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A).  
 C. Assertion (A) is true but reason (R) is false.  
 D. Assertion (A) is false but reason (R) is true.

23. **Assertion (A)** : A charged body loses its charge if we touch it with our hands.

**Reason (R)** : Our body conducts its charges to the earth.

- Ⓐ A                                      Ⓑ B                                      Ⓒ C                                      Ⓓ D

#### Case Based Questions (24-25):

The destructive energy of an earthquake is measured by the Richter scale. This scale has the readings from 1 to 10. The reading of magnitude 3 on the Richter scale would be recorded by a scismograph. If the Richter scale gives a reading of magnitude 3, then the earthquake is not likely to cause much damage. Generally, earthquake of magnitudes higher than 5 is considered destructive in nature.

24. Which of these phenomena is likely to result in an earthquake

- Ⓐ Disturbances occurring deep inside the Earth's crust  
 Ⓑ Uneven heating of the earths surface  
 Ⓒ Accumulation of charges on the clouds  
 Ⓓ Condensation of water vapour.

25. The crust of the Earth is not one piece but broken down into many fragments known as

- Ⓐ Deserts                                      Ⓑ Coastal region                                      Ⓒ Plates                                      Ⓓ tropical region

## Chemistry

26. A student lists the characteristics of the outermost zone of the flame as shown:

- (a) It gives flame its blue colour  
 (b) It is the least hot zone of the flame

(c) It is the zone of complete combustion

Which of these statement(s) explain(s) the reason why goldsmiths blow air in this zone of flame?

- Ⓐ Only a                      Ⓑ Only c                      Ⓒ Both a and c                      Ⓓ Both b and c

27. The table shows the ignition temperature of four substances:

Substance	Ignition temperature (°C)
A	80
B	39
C	110
D	25

Which substance will catch fire easily when heated at 50°C

- Ⓐ A & C                      Ⓑ B & D                      Ⓒ C & D                      Ⓓ A & D

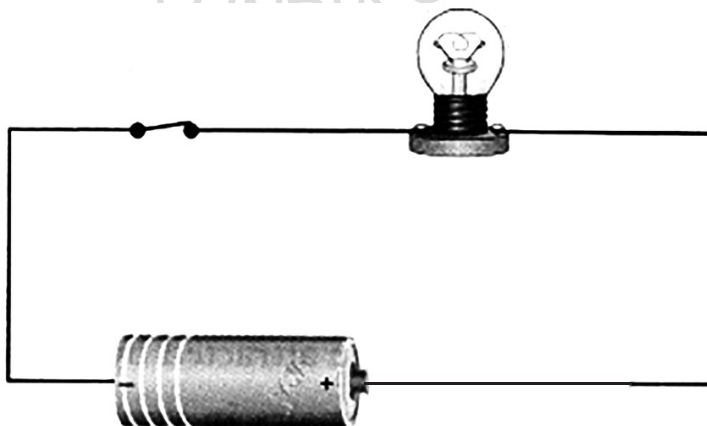
28. The calorific value of wood and coal is 20,000 KJ/Kg and 30,000 KJ/Kg respectively. Which will produce the most heat?

- Ⓐ 500 grams of coal      Ⓑ 1 kilogram of coal      Ⓒ 500 grams of wood      Ⓓ 2 kilogram of wood

29. A student tries to burn a piece of wood with a matchstick. He notices that every time he brings the matchstick closer to coal, the coal turns red but it does not catch fire. Why does this happen?

- Ⓐ Because the matchstick and coal are both made of wood and do not burn in normal conditions  
 Ⓑ Because matchsticks are made in a way to burn only smaller things like paper and plastic sheets  
 Ⓒ Because the matchstick cannot heat the coal to a very high temperature where it starts burning  
 Ⓓ Because matchstick being smaller burns quickly and could not provide enough heat for coal to start burning

30. A student makes an electric circuit as shown:



The student notices that the bulb in the circuit is not glowing even though the circuit is complete. His friend advises him to use a LED at the place of the bulb. Why is an LED preferred over a bulb in the circuit?

- Ⓐ LEDs are brighter than bulbs  
 Ⓑ LEDs consume more energy than a bulb  
 Ⓒ LEDs eliminate the use of the battery in the circuit  
 Ⓓ LEDs can glow even when a weak current flows in the circuit

31. What happens when current is passed in the solution of copper sulphate having iron nail as cathode and copper rod as anode?
- (A) Copper forms a layer on the iron nail                      (B) Iron gets deposited on the copper rod  
(C) Iron rod completely dissolves in the solution              (D) Sulphur forms a layer on the walls of the Beaker
32. An electric current can produce
- (A) heating effect only    (B) chemical effect only  
(C) magnetic effect only    (D) chemical, heating and magnetic effects
33. When petroleum and natural gas are extracted through the rock layers, natural gas is found to be present above the oil. What explains the observation?
- (A) They have different mass                                      (B) They have different densities  
(C) They have different physical state                          (D) They have different amount of impurities
34. Which by product obtained after processing coal is useful in manufacturing plastics, synthetic dyes, naphthalene balls etc. The byproduct is:
- (A) coal gas                      (B) coal tar                      (C) coke                      (D) paraffin wax
35. Choose the correct statement from the following:
- (A) It is difficult to transport natural gas through pipes  
(B) The disadvantage of natural gas is that it cannot be used directly for burning in homes  
(C) Natural gas is stored under high pressure as compressed natural gas  
(D) Natural gas cannot be used for power generation
36. Match the substances in column A with their uses given in column B.

Column A (Substance)		Column B (Application)	
(i)	Gold	(a)	Thermometer
(ii)	Iron	(b)	Electric wires
(iii)	Aluminium	(c)	Wrapping food
(iv)	Carbon	(d)	Jewelery
(v)	Copper	(e)	Machinery
(vi)	Mercury	(f)	Fuel

- (A) (i)—(d), (ii)—(e), (iii)—(c), (iv)—(f), (v)—(b), (vi)—(a)  
(B) (i)—(d), (ii)—(e), (iii)—(c), (iv)—(a), (v)—(b), (vi)—(f)  
(C) (i)—(d), (ii)—(e), (iii)—(c), (iv)—(b), (v)—(f), (vi)—(a)  
(D) (i)—(d), (ii)—(e), (iii)—(a), (iv)—(f), (v)—(b), (vi)—(c)
37. Two elements 'X' and 'Y' are reacted with oxygen to form their respective oxides. They are then dissolved in water. Element 'X' forms a hydroxide which is basic in nature. Element 'Y' forms an acid. What can element 'X' and 'Y' be classified as?
- (A) X-metal; Y-non-metal                                      (B) Y-non-metal; Y-metal  
(C) X-metal; Y-metal    (D) X-non-metal; Y-non-metal
38. What is the formula of sodium zincate?
- (A) NaZnO                      (B) NaZnO<sub>2</sub>                      (C) Na<sub>2</sub>ZnO<sub>2</sub>                      (D) S<sub>2</sub>ZnO<sub>2</sub>



39. If a solid non-metal forms oxides of type  $X_2O_5$ , then the formula of its corresponding chloride is:

- (A)  $XCl_3$                       (B)  $XCl_5$                       (C)  $X_2Cl_5$                       (D)  $X_3Cl_2$

■ **Assertion Reason based Questions (40–43):**

**Directions:** Read the following questions and choose any one of the following four responses.

- A: Assertion and Reason both are correct and Reason is the correct explanation of Assertion.  
 B: Assertion and Reason both are correct and Reason is not the correct explanation of Assertion.  
 C: Assertion is correct but Reason is wrong.  
 D: Assertion is wrong but Reason is correct.

40. **Assertion (A):** The temperature at which substance starts burning is called ignition temperature.

**Reason (R):** A chemical process in which a substance react with oxygen to give of heat and light is cancel combustion.

- (A) a                      (B) b                      (C) c                      (D) d

41. **Assertion (A):** L.P.G means liquefied petroleum gas.

**Reason (R):** C.N.G means compressed natural gas.

- (A) a                      (B) b                      (C) c                      (D) d

42. **Assertion (A):** Dilute hydrochloric acid is a good conductor of electric current.

**Reason (R):** Glowing of a bulb is due to heating effect of electric current.

- (A) a                      (B) b                      (C) c                      (D) d

43. **Assertion (A):** Gases like  $CO_2$ , water vapour, methane is called green house gases.

**Reason (R):** These gases are responsible for global warming

- (A) a                      (B) b                      (C) c                      (D) d

■ **Case Study Based Questions (44–46):**

Renewable resources are those that are present in unlimited quantity in nature. Non-newable resources limited in nature. They can be exhausted by human activities. As they are limited, they are called exhaustible resources, ex. coal, petroleum etc. They cannot be prepared in the laboratory. It takes millions of years to be formed from dead organisms.

44. Which of the following is inexhaustible resources?

- (A) Air                      (B) Water                      (C) Sunlight                      (D) All of these

45. PCRA stands for:

- (A) Petroleum Control Research Association                      (B) Petroleum Conservation Research Association  
 (C) Petroleum Council Research Association                      (D) Petroleum Control Research Academy

46. Which is not the characteristic of a good fuel?

- (A) It should leave very little ash after burning                      (B) It should be clean odorless  
 (C) It must have high cost                      (D) It must be easily available

47. The calorific value of wood and coal is 20,000 KJ/Kg and 30,000 KJ/Kg respectively. Which will produce the most heat?

- (A) 500 g of coal                      (B) 1 kg of coal                      (C) 500 g of wood                      (D) 2 kgs of wood



48. In an experiment 4.5 kg of a fuel was completely burn. The heat produced was measured to be 1,80,000 KJ; calculate the calorific value of the fuel.  
 (A) 40,000 KJ/Kg      (B) 45 KJ/Kg      (C) 20,000 KJ/Kg      (D) 4000 KJ/Kg
49. Which one of the following has the highest calorific value?  
 (A) Kerosene      (B) Petrol      (C) L.P.G      (D) Hydrogen
50. If the formula of metal sulphite of a metal 'M' is  $MSO_3$ . Give the formula of metal phosphate.  
 (A)  $M(PO_4)_2$       (B)  $M(PO_4)$       (C)  $M_3(PO_4)_2$       (D)  $M_3(PO_3)_2$

## Mathematics

51. A rational number  $\frac{a}{b}$  is greater than  $\frac{c}{d}$  if (for all positive a, b, c, d)  
 (A)  $a > c$       (B)  $b < d$       (C)  $ad < bc$       (D)  $ad > bc$
52. If the multiplicative inverse of  $\frac{15}{3}$  is  $\frac{a}{b}$ , then value of (a+b) can be  
 (A) 3      (B) 4      (C) 5      (D) 6
53. Choose the correct statement.  
 (A) The set of rational members is countably infinite  
 (B) The set of rational numbers is uncountably infinite.  
 (C) The set of rational numbers is countably finite.  
 (D) The set of rational numbers is uncountably finite.
54. Two buildings are 20 m and 25 m high. If the buildings are 12 m apart, then the distance between their top is  
 (A) 12m      (B) 13m      (C) 14m      (D) 5m
55. Let,  $P = \sqrt{n^2 + (n+1)^2 + (n(n+1))^2}$  where n is a positive integer. Choose the correct option.  
 (A) p is a positive integer for all values of n.  
 (B) p is a positive integer for same values of n  
 (C) p is not a positive integer for at least one value of n  
 (D) can't say anything.
56. Let  $x = \sqrt{\sqrt{14641}}$  then  
 (A)  $1 \leq x \leq 10$       (B)  $10 \leq x \leq 20$       (C)  $20 \leq x \leq 30$       (D) x is irrational.
57. Let  $x^3 + y^3 + z^3 = 2026$  where x, y, z are odd positive integers then the number of order triplet (x, y, z) is  
 (A) more than 20 but less than 50      (B) infinitely many  
 (C) 2      (D) none of these
58. If a number is tripled, then its cube is k times the cube of the given number. Find the value of 2k.  
 (A) 27      (B) 18      (C) 9      (D) none of these
59. Find the volume of a cube whose surface area is  $150 \text{ cm}^2$ .  
 (A)  $125 \text{ cm}^3$       (B)  $25 \text{ cm}^3$       (C)  $\sqrt{150} \text{ cm}^3$       (D)  $625 \text{ cm}^3$

60. Find the value of  $(a+b+c)$  if

$$6 \times a + 3 = 63, \quad b \times 10 + 5 = 45 \quad 3 \times 10 + c = 39$$

- (A) 32                      (B) 23                      (C) 54                      (D) 93

61. If  $a \times 100 + 4 \times 10 + 6 = 246$  and

$$b \times 100 + 3 \times 10 + c = 438 \text{ then calculate the three digit number } abc. \text{ (Here } abc \neq a.b.c)$$

- (A) 428                      (B) 824                      (C) 284                      (D) 248

62. Guess a three digit number. Shift the ones digit of the original number to the left end and shift the hundreds digit of the original number to the right end. Add the above three numbers. Then the result is always divisible by

- (A) 19                      (B) 29                      (C) 37                      (D) 41

63. Choose the correct statement :

- (A)  $5^x$  is a polynomial in  $x$ .                      (B) Every polynomial is a multinomial  
(C) Every multinomial is a polynomial                      (D)  $x + x + x$  is an example of trinomial.

64. What is degree of the polynomial  $10x^3y + 4x^4y^2 - y^3x^4$  ?

- (A) 3                      (B) 4                      (C) not defined                      (D) none of these

65. Let  $p(x)$  and  $q(x)$  be two quadratic polynomials in  $x$ . Then degree of  $p(x) + q(x)$  is

- (A) 2                      (B) 1                      (C) 0                      (D) none of these

66. Consider a number  $x^n$  (where  $x \neq 0, n \neq 0$  together) then choose the correct option.

- (A)  $x$  is base                      (B)  $n$  is exponent                      (C)  $x^n$  as a whole is power                      (D) All of these.

67.  $(a^{-1} + b^{-1}) \div (a + b) = ?$

- (A)  $ab$                       (B)  $ab^{-1}$                       (C)  $(ab)^{-1}$                       (D) none of these

**Assertion-Reason type Questions (13–14):**

**Direction :** A statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option.

- A. Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).  
B. Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A).  
C. Assertion (A) is true but reason (R) is false.  
D. Assertion (A) is false but reason (R) is true.

68. Let,  $S(n) =$  sum of all the digits of number  $n$  and  $p = 2^3 2^1 2^3 4$  then find  $S(p)$ .

- (A) 2                      (B) 4                      (C) 6                      (D) 8

69. One of the factor of  $(n^2 - 1)$  is

- (A)  $n + 1$                       (B)  $n - 1$                       (C)  $(1 - n)$                       (D) all of these

70. If  $x^4 + y^4 - x^2y^2 = (x^2 + y^2 + k_1xy)(x^2 + y^2 + k_2xy)$  then  $5^{k_1+k_2}$  is

- (A) 0                      (B) 1                      (C) -2                      (D) -3

**Assertion-Reason type Questions (71-72):**

**Direction :** A statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option.

- A. Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).  
 B. Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A).  
 C. Assertion (A) is true but reason (R) is false.  
 D. Assertion (A) is false but reason (R) is true.

71. **Assertion (A):** HCF (0, -4) = 4

**Reason (B):** HCF (a, b) is the highest common factor of a and b.

- Ⓐ A                                      Ⓑ B                                      Ⓒ C                                      Ⓓ D

72. **Assertion (A):**  $\left(\frac{1}{p} + q\right)\left(\frac{1}{p} - q\right) = \frac{1}{p^2} - \frac{1}{q^2}$

**Reason (B):**  $(a + b)(a - b) = a^2 - b^2$

- Ⓐ A                                      Ⓑ B                                      Ⓒ C                                      Ⓓ D

**Case Based Questions (73-75):**

A company produces and sells a certain product. The cost of producing (x) units of the product is given by  $C(x) = x^2 - 4$  and the revenue generated from selling (x) units of the product is given by  $R(x) = x^2 + x - 6$ . And profit (p(x) is given by  $P(x) = R(x) - C(x)$ .

Based on the above scenario answer the following questions.

73. Determine profit function.

- Ⓐ  $x + 2$                                       Ⓑ  $x - 2$                                       Ⓒ  $-x + 2$                                       Ⓓ none of these

74. Factorize cost function.

- Ⓐ  $(x + 2)(x - 2)$                                       Ⓑ  $(2 + x)(2 - x)$                                       Ⓒ  $(x + 2)(x - 2)$                                       Ⓓ none of these

75. If  $P(\alpha) = 0$  then  $\alpha = ?$

- Ⓐ 0                                      Ⓑ 1                                      Ⓒ 2                                      Ⓓ 3

**Biology**

76. The male and the female gametes in humans are respectively, known as:

- Ⓐ Ovum and sperm                                      Ⓑ Sperm and ovum                                      Ⓒ Egg and ovum                                      Ⓓ Egg and womb

77. The bulges in the body of a Hydra that develop into new individuals are called \_\_\_\_\_

- Ⓐ bud                                      Ⓑ tentacles                                      Ⓒ embryo                                      Ⓓ None

78. Select the odd one out:

- Ⓐ Humans                                      Ⓑ Cows                                      Ⓒ Dolphin                                      Ⓓ Fish

79. In sexual reproduction, which single cell ultimately develops into a new individual?

- Ⓐ Sperm                                      Ⓑ Egg                                      Ⓒ Zygote                                      Ⓓ Embryo

80. The process of release of an ovum every 28-30 days in a woman is called \_\_\_\_\_

- Ⓐ Menstruation                                      Ⓑ Ovulation                                      Ⓒ Placentation                                      Ⓓ Puberty

81. Which combination of sex chromosomes is present in a female?

- Ⓐ XX                                      Ⓑ XY                                      Ⓒ YX                                      Ⓓ YY

82. Which of the following characteristic is not a secondary sexual characteristic of girls?  
 (A) Enlargement of breasts (B) Development of hair in armpits  
 (C) Development of Adam's apple (D) Increase in height
83. Which of the following is a method of food preservation?  
 (A) Dehydration (B) Boiling (C) Pasteurization (D) All
84. Select the incorrect statement:  
 (A) Viruses are different from other microbes because they are macroscopic.  
 (B) Viruses are acellular.  
 (C) A virus can only multiply within a specific host cell.  
 (D) Flu is caused by virus.
85. Which of these can be both unicellular and multicellular?  
 (A) Bacteria (B) Algae (C) Protozoa (D) Mosquito
86. The process by which sugar can be converted to alcohol with the help of a particular type of microbe is called \_\_\_\_\_  
 (A) Preservation (B) Curdling (C) Fermentation (D) Refrigeration
87. Which of the following machines can be used to harvest a crop and also to beat out the grain from the chaff?  
 (A) Harvester (B) Thresher (C) Combine (D) Harrow
88. The supply of water to crops at regular intervals is called \_\_\_\_\_  
 (A) Irrigation (B) Weeding (C) Cultivation (D) Ploughing
89. Which of these is a natural cause of deforestation?  
 (A) Forest fires (B) Clearing forest land for agriculture  
 (C) Timber logging (D) Using wood from the trees as a fuel
90. Continuous soil erosion from a region can turn it to a :  
 (A) Mountain (B) Desert (C) Forest (D) Lake

#### Assertion-Reason type Questions (91-96):

**Direction :** A statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option.

- A. Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).  
 B. Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).  
 C. Assertion (A) is true but reason (R) is false.  
 D. Assertion (A) is false but reason (R) is true.
91. **Assertion:** Some birds cover long distances annually, called migration.  
**Reason:** Birds generally migrate from warmer regions to colder regions of the world.  
 (A) A (B) B (C) C (D) D
92. **Assertion (A):** Animals are protected in captivity, in a wild life sanctuary.  
**Reason (B):** A biosphere reserve can have a wildlife sanctuary in it.  
 (A) A (B) B (C) C (D) D
93. **Assertion (A):** Yeast is a unicellular algae.

**Reason (B):** It is widely used in bakeries.

- Ⓐ A                                      Ⓑ B                                      Ⓒ C                                      Ⓓ D

94. **Assertion (A):** Antibiotics are used to cure infectious diseases in humans.

**Reason (B):** Antibiotics may be extracted from some types of bacteria and fungi.

- Ⓐ A                                      Ⓑ B                                      Ⓒ C                                      Ⓓ D

95. **Assertion (A):** It is necessary to dry harvested grains before storing them.

**Reason (B):** Presence of moisture can encourage the growth of microbes in them.

- Ⓐ A                                      Ⓑ B                                      Ⓒ C                                      Ⓓ D

96. **Assertion (A):** Seeds should not be sown too far from each other.

**Reason (B):** The emerging seedlings will compete with each other for space and nutrients if seeds are sown closely.

- Ⓐ A                                      Ⓑ B                                      Ⓒ C                                      Ⓓ D

**Case Based Questions (97–100):**

Read the given passage and answer the following questions:

Some bacteria, like *Azobacter* and *Rhizobium*, enrich the soil by fixing atmospheric nitrogen and dissolving the mineral nutrients present in it. These microorganisms, called biofertilisers, are cultivated and packed, and supplied to farmers for use.

97. *Rhizobium* is found in the \_\_\_\_\_ of leguminous plants.

- Ⓐ roots                                      Ⓑ flowers                                      Ⓒ leaves                                      Ⓓ stem

98. Select the correct statement:

- Ⓐ Biofertilisers are the same as green manure.  
 Ⓑ Manure supplies inorganic minerals, like N, P and K, to the soil.  
 Ⓒ Fertilisers are made by decomposition of wastes like dry leaves, cow dung, etc.  
 Ⓓ Fertilisers do not provide humus to the soil.

99. Which of the following is not a way of increasing soil fertility?

- Ⓐ Crop rotation                                      Ⓑ Application of vermicompost  
 Ⓒ Application of fertilisers                                      Ⓓ Fumigation

100. A weedicide \_\_\_\_\_. Select the option given below that would correctly complete the sentence

- Ⓐ increases the water holding capacity of the soil.                                      Ⓑ decreases the fertility of soil  
 Ⓒ enhances the number of insect pests                                      Ⓓ kills unwanted plants in the field