

# ENGLISH

- 15 –

**10. The passive of the sentence - “Don’t let people see you.” is:**

- a) People should not be let to see you.
- b) Don’t let yourself to be seen.
- c) Don’t let yourself be seen.
- d) You shouldn’t be seen by people.

## PHYSICS

**11. Which is the following relation is incorrect? (Symbols have their usual meanings)**

- a)  $F = m \times a$
- b)  $P = F \times d$
- c)  $W = F \times d$
- d)  $P = F \times v$

**12. Which of the following statement is incorrect?**

- a) Speed and velocity have same unit.
- b) Slope of velocity-time graph gives acceleration of a body.
- c) Momentum is the product of mass and acceleration.
- d) Newton’s 2<sup>nd</sup> law is quantitative law.

**13. How much work is done when 10 kg mass is lifted to a height of 10m?**

- a) 10 J
- b) 100 J
- c) 1,000 J
- d) 10,000 J

**14. Which of the following is not the effect of gravity?**

- a) Atmosphere in planet
- b) Tides in sea
- c) Existence of solar system
- d) Inertia

**15. What fraction of a wooden raft of density  $0.8 \text{ gcm}^{-3}$  will be inside the sea water of density  $1.2 \text{ gcm}^{-3}$ ?**

- a)  $\frac{2}{3}$
- b)  $\frac{1}{2}$
- c)  $\frac{2}{5}$
- d)  $\frac{1}{3}$

**16. The range of mercury thermometer is**

- a)  $-39^{\circ}\text{C}$  to  $357^{\circ}\text{C}$
- b)  $0^{\circ}\text{C}$  to  $100^{\circ}\text{C}$
- c)  $-117^{\circ}\text{C}$  to  $78^{\circ}\text{C}$
- d)  $-39^{\circ}\text{C}$  to  $100^{\circ}\text{C}$

**17. Specific heat capacity of substance depends on**

- a) Amount of heat supplied
- b) Mass of given substance
- c) Nature of substance
- d) All of above

GLOBAL  
SCHOOL  
OF SCIENCE



- 19 –



## SET – III

|       |       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1. d  | 2. a  | 3. b  | 4. a  | 5. d  | 6. c  | 7. d  | 8. b  | 9. a  | 10. c |
| 11. b | 12. c | 13. c | 14. d | 15. a | 16. a | 17. c | 18. c | 19. b | 20. b |
| 21. d | 22. b | 23. b | 24. c | 25. c | 26. d | 27. b | 28. b | 29. b | 30. b |
| 31. b | 32. d | 33. a | 34. c | 35. b | 36. b | 37. c | 38. c | 39. d | 40. d |
| 41. a | 42. b | 43. b | 44. a | 45. c | 46. c | 47. b | 48. c | 49. d | 50. d |

## || PHYSICS ||

11. b)  $P = F \times d$ .
12. c) Momentum is the product of mass and velocity.
13. c)  $\text{Work} = \text{Force} \times \text{distance}$   
 $= mg \times d$   
 $= 10 \times 10 \times 10$   
 $= 1,000 \text{ J.}$
14. d) Inertia is the tendency of any object to continue its state of rest or uniform motion unless it is acted by some external force.
15. a)  $\text{Weight of wood} = \text{weight of water displaced}$   
 $V_{\text{wood}} \times \rho_{\text{wood}} \times g = V_{\text{water displaced}} \times \sigma_{\text{water}} \times g$   
 Since  $V_{\text{water displaced}} = V_{\text{wood inside water}}$   
 $V_{\text{wood}} \times \rho_{\text{wood}} = V_{\text{wood inside water}} \times \sigma_{\text{water}}$   
 $\frac{V_{\text{wood inside water}}}{V_{\text{wood}}} = \frac{\rho_{\text{wood}}}{\sigma_{\text{water}}} = \frac{2}{3}$
16. a) For mercury thermometer range is  $-39^{\circ}\text{C}$  to  $357^{\circ}\text{C}$  and for alcohol thermometer range is  $-117^{\circ}\text{C}$  to  $78^{\circ}\text{C}$ .

17. c) Specific heat capacity of a body is defined as the amount of heat required to raise the temperature of unit mass of body by  $1\text{K} / 1^{\circ}\text{C}$ . Its value depends upon the nature of the material of the body.
18. c) Power,  $P = \frac{1}{f}$  when  $f$  is in meter.  
 or,  $5 = \frac{1}{f}$   
 or,  $f = \frac{1}{5} \text{ m}$   
 or,  $f = \frac{100}{5} \text{ cm} = 20 \text{ cm}$ , convex
19. b) Here,  $N_p = 300$ ,  $V_p = 220\text{V}$   
 $N_s = 2400$ ,  $V_s = ?$   
 Now, we know,  

$$\frac{V_s}{V_p} = \frac{N_s}{N_p}$$
 or,  $V_s = \frac{N_s}{N_p} \times V_p = 1760 \text{ V}$
20. b) Echo is based upon reflection of sound and minimum distance for echo is  $17\text{m}$  and minimum time interval is  $0.1 \text{ sec}$ .

## || CHEMISTRY ||

21. d) Dobereiner Triad ( 1817 AD)
22. b) Temperature : Other factors may not be always affects the rate of reaction but temperature always affects the rate of reaction.
23. b)  $160$  : Suppose amount of solvent =  $x$   
 Amount of solution =  $200 \text{ gram}$   
 Amount of solute =  $(200 - x) \text{ gram}$   
 Solubility =  $25$   
 From solubility relation,

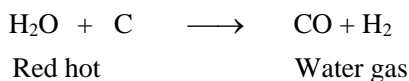


$$\text{Solubility} = \frac{\text{Weight of solute}}{\text{Weight of solvent}} \times 100$$

$$25 = \frac{200 - X}{X} \times 100$$

$$X = 160 \text{ gram}$$

24. c)  $\text{NaHSO}_4$  : If polybasic acid is neutralize partially by a base, the salt formed is known as acid salt.
25. c) Horn silver : It is the minerals of silver but not ore. Silver can't be extracted economically from this mineral.
26. d)  $\text{CaSO}_4 \cdot \frac{1}{2} \text{H}_2\text{O}$
27. b) Urea : First synthesized organic compound is Urea and first synthesized organic compound from its constituent is acetic acid.
28. b) Sodium lauryl sulphate
29. b) Chromium oxide
30. b)  $\text{CO} + \text{H}_2$  : Water gas is prepared by passing steam over red hot coke or carbon.



## || MATHEMATICS ||

31. b) now, he is  $q - p$  years and after  $r$  years, he will be  $q - p - r$ .
32. d) SAA is the axiom of congruency, so it produces the unique triangle.
33. a) Here the product of roots = 1  

$$\frac{K}{5} = 1 \Rightarrow K = 5$$
34. c) For the existence of a matrix, it is not necessary that  $A$  must have different entries.
35. b)  $\tan x + \tan 3x = -\tan 2x [1 - \tan x \cdot \tan 3x]$

$$\frac{\tan x + \tan 3x}{1 - \tan x \cdot \tan 3x} = -\tan 2x$$

$$\tan (x + 3x) = \tan (-2x)$$

$$x = 0$$

36. b) Check options

a)  $AM = 7.5$ ,  $GM = 6$ ,  $AM - GM = 1.5$  (wrong)

b)  $AM = 6.5$ ,  $GM = 6$ ,  $AM - GM = 0.5$  (correct)

$$37. \text{ c) } f[f(x)] = \frac{1}{1 - \frac{1}{1-x}} = \frac{x-1}{x}$$

$$f[f\{f(x)\}] = f\left(\frac{x-1}{x}\right)$$

$$= \frac{1}{1 - \frac{x-1}{x}}$$

$$= \frac{x}{x - x + 1}$$

$$= x.$$

38. c) central form  $(x-3)^2 + (y-4)^2 = 5^2$

centre  $(3, 4)$ , radius  $= 5$

distance between  $(3, 4)$  and  $(0, 9) = \sqrt{34}$  which is greater than 5

39. a) Use the formula of

$$a^3 + b^3 + c^3 = (a + b + c)(a^2 + b^2 + c^2 - ab - bc - ca) + 3abc$$

40. d) obvious

## || BIOLOGY ||

41. b) • Phycology is the study of Algae.

• Mycology is the study of Fungi.

• -virology is the study of virus

42. b) • Heliophytes: Sunlight loving plants. E.g. Sunflower

- Halophytes : Salt loving plants . E.g. Barley
- Sciophytes : Shade loving plants . E.g. Moss
- 43. b) • Prophase- disappearance of nuclear membrane, chromatid threads become visible
- Metaphase- chromosomes arranged in equatorial line
- Anaphase- centromere breaks and moves towards their poles
- Telophase- reappearance of nuclear membrane.
- 44. a) • Prothallus is the monoecious stage ( gametophytic stage) in life cycle of fern
- 45. c) • In photosynthesis, glucose or carbohydrate is formed from carbon dioxide and water in presence of sunlight and chlorophyll.
- Anabolic – constructive phase
- Catabolic – destructive phase
- 46. c) • Each time liver filters alcohol, some of the liver cells die.
- 47. b) • embryology is study of embryo
- Exocrinology is study of external secretions like pheromones.
- Entomology is study of insects.
- 48. c) • *Rana* is genus of frog, an amphibian.
- 49. d) • The three layers of eye is Sclera, Choroid and Retina.
- 50. d) • The body needs vitamin K to produce prothrombin, a protein and clotting factor

