

**GSFC UNIVERSITY**  
**SCHOOL OF SCIENCE**  
**Admission Common Test for B.Sc. Industrial Chemistry, 2023-24**

**Time: 30 Minutes**

**Total Marks: 30**

**Instructions:**

- i. All questions are compulsory.
  - ii. All questions are Multiple Choice Questions.
  - iii. Each question Carries 1 Mark.
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1. The phenomenon that cannot take place in sound waves is
  - a. Reflection
  - b. Interference
  - c. Diffraction
  - d. Polarization
2. Working together, sharing and cooperative - means –
  - a. Empowerment
  - b. Collaborative skills
  - c. Delegating Responsibilities
  - d. None
3. If..... I would not lose temper
  - a. I were you
  - b. I was you
  - c. I am not you
  - d. I am you
4. Please, come..... the bathroom.
  - a. out of
  - b. over
  - c. on
  - d. in
5. Please, don't laugh..... those beggars.
  - a. for
  - b. against
  - c. at
  - d. from
6. Look at all those black clouds! It.... today.



- a. Is going to rain
  - b. Is raining
  - c. Will be rain
  - d. Rains
7. In Huygen's wave theory, the locus of all point in the same state of vibration is known as
- a. Wavefront
  - b. Vibrator
  - c. Frequency
  - d. Wavelength
8. Speed of sound will be maximum in
- a. Solid
  - b. Liquid
  - c. Gases
  - d. water
9. Process which occurs at constant temperature is known as
- a. Isothermal
  - b. Adiabatic
  - c. Isobaric
  - d. Isochoric
10. In the famous Einstein's equation  $E = mc^2$ , what does 'm' stand for?
- a. Mass
  - b. Momentum
  - c. Meter
  - d. Mega
11. Derivative of  $\sin x =$  \_\_\_\_\_
- a.  $-\cos x$
  - b.  $\sin x$
  - c.  $\cos x$
  - d.  $-\sin x$
12. The differential equation is called a linear if degree of the equation is
- a. linear
  - b. Cubic
  - c. quadratic
  - d. none
13. The graph of  $y = x$  and  $x = 2$  is
- a. Square
  - b. Triangle
  - c. Circle
  - d. Parabola



14. The integration of  $\sin x$  is
- $-\cos x$
  - $-\sin x$
  - $-\tan x$
  - $\cos x$
15. Average of all observations in a set of data is known as
- Median
  - Range
  - Mean
  - Mode
16. Hydrogen bond is strongest in
- S-H-O
  - O-H-S
  - F-H-F
  - O-H-N
17. Which of the following alkaline earth metals is the rarest in the earth crust?
- Calcium
  - Strontium
  - Radium
  - Beryllium
18. The main use of salt in the diet is to
- make the taste of food better
  - produce in small amounts the hydrochloric acid required for the digestion of food
  - ease the process of cooking
  - increase the solubility of food particles in water
19. Which of these metals is most commonly used as control rods in the nuclear reactors?
- Platinum
  - Cadmium
  - Cobalt
  - Silver
20. The polymer containing strong intermolecular H-bonding and crystalline nature is



- a. Polystyrene
- b. Natural rubber
- c. Teflon
- d. Nylon 6, 6

21. Bithional added to soap acts as

- a. buffering agent
- b. softener
- c. drying
- d. antiseptic

22. Drug which is used to reduce anxiety and brings calmness is known as

- a. Diuretic
- b. Analgesic
- c. Antacids
- d. Tranquilizer

23. Butylated Hydroxy Toluene (BHT) as a food additive acts as

- a. flavouring agent
- b. colouring agent
- c. cleaning agent
- d. antioxidant

24.  $\alpha$ -D (+) glucose and  $\beta$ -D (+) – glucose are

- a. Enantiomers
- b. Geometrical isomers
- c. Epimers
- d. Anomers

25. Hydrolysis of sucrose gives

- a. Glucose only
- b. Glucose and galactose
- c. Maltose
- d. Glucose + fructose

26.  $F_2C = CF_2$  is a monomer of

- a. Glyptal



- b. Nylon-6
- c. Buna-S
- d. Teflon

27. The correct order of increasing bond length of C – H, C – O, C – C and C = C is

- a.  $C-H < C-O < C-C < C=C$
- b.  $C-H < C=C < C-O < C-C$
- c.  $C-C < C=C < C-O < C-H$
- d.  $C-O < C-H < C-C < C=C$

28. When conc.  $H_2SO_4$  is heated with  $P_2O_5$ , the acid is converted into

- a. sulphur
- b. sulphur dioxide
- c. sulphur trioxide
- d. a mixture of sulphur dioxide and sulphur trioxide

29. Which of these is NOT an allotropic form of carbon?

- a. Diamond
- b. Graphite
- c. Fullerene
- d. None of the above

30. What is the bond length in C=C bond?

- a. 156 pm
- b. 148 pm
- c. 134 pm
- d. 172 pm

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