



Total
Qns:45

GME SAMPLE QUESTION PAPER

Max Marks: 100
Duration: 70 Min

Instructions:

- Question no 1 to 37 are of objective type.
- Question no 38 to 45 to be written separately.

SECTION A: FLUID MECHANICS

Qn 1 to 5 carry 2 marks each, Qn 6 to 8 carry 3 marks each, Qn 9 to 10 carry 4 marks each.

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| 1. | Select the correct statement | |
| | (A) standard atmospheric pressure is 1.01325 bar | (B) a barometer reads the difference between load and standard atmospheric pressure |
| | (C) standard atmospheric pressure is the mean local atmospheric pressure at sea level | (D) local atmospheric pressure is always below standard atmospheric pressure |
| 2. | In case of end to end connection of two or more pipes in series, the _____ each pipe. | |
| | (A) same rate of flow passes through | (B) head loss is same through |
| | (C) rate of flow in each pipe is proportional to the length of | (D) total flow rate is the sum of flow rate in |
| 3. | Foot valves provided in pumps are _____ valves. | |
| | (A) relief | (B) pressure reducing |
| | (C) three way | (D) directional control |
| 4. | The pitot-static tube measures | |
| | (A) dynamic pressure | (B) static pressure |
| | (C) total pressure | (D) difference in static and dynamic pressure. |
| 5. | Surface molecules have _____ energy than interior molecules in a liquid | |
| | (A) less | (B) more |
| | (C) same | (D) none of the above |
| 6. | Pressure in Pascals at a depth of 1m below the free surface of a body of water will be equal to | |
| | (A) 1 Pa | (B) 98.1 Pa |
| | (C) 981 Pa | (D) 9810 Pa |
| 7. | If pressure at any point in the liquid approaches the vapour pressure, liquid starts vaporising and creates pockets or bubbles of dissolved gases and vapours. This phenomenon is | |
| | (A) surface tension | (B) adhesion |
| | (C) vaporisation | (D) cavitation |
| 8. | Which of the following valves will incur maximum pressure drop for the same discharge of water? | |
| | (A) gate valve | (B) butterfly |
| | (C) globe | (D) needle valve |



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| 9. | Buoyant force is (A) the resultant force on a body due to the fluid surrounding it (B) the resultant force acting on a floating body (C) equal to the volume of liquid displaced (D) the force necessary to maintain equilibrium of a submerged body. |
| 10. | The force exerted by a jet on a curved plate is (A) less than that on flat plate (B) equal to that on a flat plate (C) more than that on a flat plate (D) sometimes more and sometimes less than that on a flat plate |
| SECTION B: THERMODYNAMICS | |
| Qn 11 to 15 carry 2 marks each, Qn 16 to 18 carry 3 marks each, Qn 19 to 20 carry 4 marks each. | |
| 11. | 1 bar pressure is nearly equal to (A) 1 mm Hg (B) 13.4 mm Hg (C) 100 mm Hg (D) 760 mm Hg |
| 12. | The quantity of heat required to raise temperature of one gram of water through 1°C is (A) one joule (B) one Kcal (C) 100 cal (D) one cal |
| 13. | The amount of heat energy required to raise the temperature of one gram of substance through one degree of Kelvin is called (A) Specific heat (B) Latent heat (C) Radiant heat (D) Molar specific heat |
| 14. | With rise of temperature, the specific heat of water (A) increases (B) decreases (C) first decreases to minimum then increases (D) remains constant |
| 15. | The standard value of atmospheric pressure taken at sea level is (A) 1.013 bar (B) 760 mm of Hg (C) $1013 \times 10^2 \text{ N/m}^2$ (D) all of these |
| 16. | Radiant heat propagates through vacuum with speed of (A) sound (B) light (C) half of light (D) less than light |
| 17. | A nozzle is a device, which (A) increases kinetic energy and decreases pressure (B) reduces kinetic energy and increases pressure. |

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| | (C) reduces both kinetic energy and pressure. (D) increases both kinetic energy and pressure |
| 18. | A liquid is boiling in an air tight vessel. Using an exhaust tube the vapour is pumped out at a faster rate. What will happen to the liquid (A) temperature will go down and boiling will continue (B) temperature will rise and boiling will continue (C) boiling will stop (D) whatever vapour inside will condense |
| 19. | Refrigeration capacity of a household refrigerator may be round about _____ tons. (A) 1.5 (B) 0.15 (C) 4.5 (D) 6.5 |
| 20. | If a heat engine gives an output of 3 kW when the input is 10,000 J/s, then the thermal efficiency of the engine will be (A) 20% (B) 30% (C) 70% (D) 76.70% |
| SECTION C: GENERAL ENGINEERING | |
| Qn. 21 to 25 carry 2 marks each, Qn 26 to 28 carry 3 marks each, Qn 29 to 30 carry 4 marks each. | |
| 21. | All the commercial liquid fuels are derived from (A) Coal (B) Crude oil (C) Fuel oil (D) LNG |
| 22. | Which of the following is not a type of energy source? (A) rheostat (B) generator (C) battery (D) solar cell |
| 23. | A 100 cc engine refers to (A) fuel tank capacity (B) lubricating oil capacity (C) swept volume (D) cylinder volume |
| 24. | A four stroke diesel engine does not have (A) cooling system (B) ignition coil (C) cam shaft (D) piston rings |
| 25. | Ratio of heat used in generation of steam to the heat supply by fuel in a same period is known as (A) boiler efficiency (B) economiser efficiency (C) chimney efficiency (D) none of these |
| 26. | Which of the listed operations will cause an automatically controlled refrigeration compressor to restart? |



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| | (A) Closing of solenoid valve (C) Increase in suction pressure | (B) Closing of expansion valve (D) Decrease in suction pressure |
| 27. | Centrifugal pump should be started with (A) delivery valve open (C) suction valve close (B) delivery valve close (D) none of above | |
| 28. | On psychometric chart, dew point temperature lines are (A) horizontal (C) straight inclined sloping downward to the right. (B) vertical (D) curved. | |
| 29. | For same power, the floor area occupied by two-stroke cycle engine as compared to four-stroke cycle engine is (A) more (C) same (B) less (D) none of these | |
| 30. | If the relative humidity of atmosphere air is 100% the rate of evaporation of water will be (A) very high (C) same as the water content in air (B) very low (D) zero | |

SECTION D: LOGIC

Qn 31 to 37 carry 1 mark each.

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| 31. | Yard is to inch as quart is to (A) gallon (C) milk (B) ounce (D) liquid | |
| 32. | Choose the word that is a necessary part of the underlined word : <u>election</u> (A) president (C) November (B) voter (D) nation | |
| 33. | What comes next in the given series? FAG, GAF, HAI, IAH, ____ (A) JAK (C) HAK (B) HAL (D) JAI | |
| 34. | All the offices on the 9th floor have wall-to-wall carpeting. No wall-to-wall carpeting is pink. None of the offices on the 9th floor has pink wall-to-wall carpeting. If the first two statements are true, the third statement is (A) True (C) Uncertain (B) False (D) None of all | |

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| 35. | Look at this series: 8, 22, 8, 28, 8, ... What number should come next? (A) 9 (B) 29 (C) 32 (D) 34 |
| 36. | Look at this series: 3, 4, 7, 8, 11, 12, ... What number should come next? (A) 7 (B) 10 (C) 14 (D) 15 |
| 37. | Which word does NOT belong with the others? (A) dodge (B) flee (C) duck (D) avoid |
| SECTION E: ENGLISH | |
| Solve the following questions. (4 x 1 = 4) | |
| 38. | Rearrange the jumbled up sentence into a meaningful one: on the road People queue formed a. |
| 39. | Make a sentence with the following word: DISCLOSE |
| 40. | Correct the following sentence: I no like coffee. |
| 41. | Complete the following sentence: The best teacher is the one who.... |
| Read the following passage and answer questions. (3 x 1 = 3) Opera refers to a dramatic art form, originating in Europe, in which the emotional content is conveyed to the audience as much through music, both vocal and instrumental, as it is through the lyrics. By contrast, in musical theater an actor's dramatic performance is primary, and the music plays a lesser role. The drama in opera is presented using the primary elements of theater such as scenery, costumes, and acting. However, the words of the opera, or libretto, are sung rather than spoken. The singers are accompanied by a musical ensemble ranging from a small instrumental ensemble to a full symphonic orchestra. | |
| 42. | Why is opera referred as a dramatic art form? |
| 43. | What are the primary elements of theater? |
| 44. | What do you understand from the above passage? |
| Write about any one of the following topics in 100 words. (5 Marks) | |
| 45. | Is competition among students good? Justify your answer. |
| | True friendship |



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