

EME MCQ QUESTION BANK

1. Work is considered positive when
 - a) Work is done on the system
 - b) **work is done by the system**
 - c) both a and b
 - d) none of the above

2. A source of energy is known as renewable source
 - a) Fossil fuel
 - b) **Solar**
 - c) CNG
 - d) All of the above

3. When driving and driven shafts are at comparatively short distance apart & higher efficiency required, the type of drive suitable is :
 - a) **Gear drive**
 - b) Belt drive
 - c) friction drive
 - d) chain drive

4. The clutch ordinarily remains in disengaged condition when it is used for power transmission in:
 - a) **Automobile**
 - b) Machine tools
 - c) Crane
 - d) Elevator

5. Which of the following type of centrifugal pump converts kinetic energy of pump into pressure energy:
 - a) Foot valve
 - b) **Casing**
 - c) Suction pipe
 - d) Impeller

6. For earth moving machines, widely used engines are:
 - a) Petrol engine
 - b) Steam engine
 - c) **Diesel engine**
 - d) Gas engine

7. The correct location of economizer is :
 - a) **Between furnace and preheater**
 - b) between airpreheater and chimney
 - c) between forced draft fan and furnace
 - d) near the superheater

8. COMPRESSOR is a machine which is used to do
 - a) lift liquid from low height to higher elevation
 - b) To store liquid
 - c) **To compress gas.**
 - d) none of the above

9. Which of the following energy is converted into electricity in a Hydo power plant
 - a) Nuclear energy
 - b) **Potential Energy of water**
 - c) Thermal Energy
 - d) all of the above

10. Which of the following is a unit of Power.
 - a) Joules
 - b) **Watt**
 - c) Meter
 - d) kilogram

11. Which of the following instrument is used to measure temperature
 a) Vernier calliper
 b) Manometer
 c) **Thermometer**
 d) none of the above
12. In a simple gear train having two gears , if driving gear rotates in clockwise direction then driven gear rotates in
 a) Clockwise direction
 b) **Anti clockwise direction**
 c) Depend on size of gear
 d) depend on no. of teeth
13. In a IC engine from which of the following source energy is converted into mechanical energy
 a) **Chemical energy of fuel.**
 b) potential energy
 c) kinetic energy
 d) All of the above
14. Which of the following instrument is used for drawing curved lines
 a) T- Square
 b) **French curves**
 c) Protractor
 d) Compass
15. The function of ozone layer is
 a) **protects the earth from harmful effect of ultraviolet rays**
 b) increase the temperature of earth
 c) increases CO₂ in atmosphere
 d) none of the above
16. In the Polytropic Process $PV^n = C$, if $n = \infty$, the process is called
 a) **isochoric**
 b) isobaric
 c) isothermal
 d) adiabatic
17. Saturation temperature of steam increase
 a) With decrease in pressure
 b) **with increase in pressure**
 c) is unaffected by pressure
 d) none of the above
18. During adiabatic process
 a) **heat transfer is zero**
 b) work transfer is zero
 c) enthalpy remains constant
 d) enthalpy change is zero.
19. The processes of Carnot cycle are
 a) Two adiabatic and two constant volume
 b) Two constant pressure and two constant volume
 c) Two isothermal and two adiabatic
 d) **Two isothermal and two isentropic**
20. The air standard cycle on which the petrol engine work is
 a) **Otto cycle**
 b) Carnot cycle
 c) Joule cycle
 d) Dual cycle
21. Pump is a machine which is used to do
 a) **lift liquid from low height to higher elevation**
 b) To store liquid
 c) To compress liquid
 d) none of the above

44. Wood is
- a) A fuel known as brown coal
 - b) **Easily available natural fuel**
 - c) Shining black
 - d) None of this
45. Water gas is
- a) **Mixture of hydrogen and carbon monoxide**
 - b) It mainly consist of CH₄
 - c) Used in heating ovens
 - d) None from above
46. Function of piston rings is
- a) To connect piston and connecting road
 - b) To transmit force from piston to crank
 - c) **To maintain a gas tight between the piston and the cylinder**
 - d) To convert reciprocating motion into rotary motion
47. In a two stroke cycle engine, one cycle is completed in the following number of revolutions of the crank shaft
- a) 2
 - b) 3
 - c) **1**
 - d) 4
48. The clearance volume in a compressor is provided
- a) To increase volumetric efficiency
 - b) to reduce the work input
 - c) **So that piston does no strike the cylinder head**
 - d) To accommodate valves in the cylinder
49. In multi stage compression as compared to single stage compression the volumetric efficiency is
- a) **more**
 - b) less
 - c) Constant
 - d) None of the above
50. Air vessel is used in
- a) Centrifugal Pump
 - b) Gear pump
 - c) Vane pump
 - d) **Single acting Reciprocating.**

EME BRIDGE COURSE

1. The unit Nm/s is called
 - a) Joule(J)
 - b) **Watt(W)**
 - c) Calorie(C)
 - d) None of this

2. The statement that when any two bodies are in thermal equilibrium with third, they are also in thermal equilibrium with each other is
 - a) First law of thermodynamic
 - b) **Zeroth law of thermodynamic**
 - c) Second law of thermodynamic
 - d) None of this

3. For a reversible process, the change in entropy(d) is given by
 - a) $dQ/T \neq d$
 - b) **$dQ/T < 0$**
 - c) $dQ/T = 0$
 - d) none of the above.

4. CNG is an excellent for
 - a) **petrol engine**
 - b) Diesel engine
 - c) Kerosene engine
 - d) All of above

5. Main disadvantage of nuclear energy is
 - a) High operating cost
 - b) **Waste disposal**
 - c) Low efficiency
 - d) All of above

6. An isothermal process is governed by
 - a) **Boyle's law**
 - b) Charles' law
 - c) Gay-Lussac law
 - d) Avogadro's law

7. The sum of internal energy (U) and the product of pressure and volume (p.v) is known as
 - a) work done
 - b) entropy
 - c) **enthalpy**
 - d) none of these

8. Dryness fraction of wet steam is
 - a) greater than 1
 - b) =1
 - c) **less than 1**
 - d) 0

9. Efficiency of rankine cycle is given by
 - a) $\frac{h_1-h_3}{h_1-h_4}$
 - b) **$\frac{h_1-h_2}{h_1-h_4}$**
 - c) $\frac{h_1-h_4}{h_1-h_2}$
 - d) $\frac{h_1-h_3}{h_1-h_2}$

10. In diesel cycle, heat is added at
 - a) constant temperature
 - b) constant volume
 - c) constant enthalpy
 - d) **constant pressure**

11. Which of the following set is of basic quantities?
 - a) **Mass, force, time**
 - b). Time, electric current, velocity
 - c) Distance, density, temperature
 - d) Distance, time, temperature

24. The strainer is used in all types of pumps for
a) Filtering the liquids to be sucked
c) To protect pump, foreign material passes through the pump.
- b) **Both (a) and (c)**
d) None of this
25. The moving part of a centrifugal pump is called a
a) **Impeller**
c) Diffuser
- b) Volute
d) Suction nozzle
26. Which of the following is boiler accessory?
a) **Economizer**
c) Safety Valve
- b) Feed check valve
d) Water level indicator
27. The function of boiler is..
a) To compressed steam
c) **To generate steam at a desired pressure**
- b) To heat feed water
d) To blow out hot gases.
28. The cam shaft speed of four stroke engine is
a) Double than crank shaft speed
c) Four times of crank shaft speed
- b) Equal to crank shaft speed
d) **Half of crank shaft speed**
29. During suction stroke in a diesel engine, it draws in
a) Vapour of petrol only
c) Mixture of petrol and air
- b) **Air only**
d) Only air
30. The compression ratio for the diesel engine is approximately in the following range
a) 5:1 to 10:1
c) 12:1 to 15:1
- b) **11:1 to 20:1**
d) 10:1 to 12:1
31. The following is the one of the characteristics of I.C. engine
a) Large in size
c) Starting is difficult
- b) Cheaper fuel may be used
d) **More efficient**
32. Which one is link between piston and crank
a) **Connecting rod**
c) Piston pin
- b) Push rod
d) Crank shaft
33. A unit consists of closed vessel, economizer, super heater, water wall tubes and it producing steam as per requirement called...
a) Boiler
c) Power plant
- b) **Steam generator**
d) I.C. engine
34. Cochran boiler is ...
a) Vertical boiler
c) Natural circulation boiler
- b) Fire tube boiler
d) **All of above**
35. The function of steam stop valve is ...
a) **To regulate flow of steam from boiler to steam pipe**
c) To separate steam from water
- b) To collect steam from drum
d) To provide safety of boiler

36. Which of the following is a not power transmission element?
a) Belt
b) Chain
c) Rope
d) **Brake**
37. When the driving and driven shafts are at comparatively larger distance apart, the type of drive suitably used is
a) Gear Drive
b) Friction Drive
c) **Belt Drive**
d) Chain Drive
38. Which of the following type of belts is also known as positive drive belt?
a) V-belt
b) **Timing belt**
c) Flat belt
d) Wedge type belt
39. Which of the following is application of Belt drive
a) Bicycle
b) **Flour mill**
c) Bus
d) All above
40. Which of the following type of drives transmit power by friction?
a) Spur gear drive
b) Worm gear drive
c) Chain drive
d) **Belt drive**
41. When the axes of two shafts are parallel, use
a) Crossed helical gears
b) Worm gears
c) Bevel
d) **Spur or helical gears**
42. A device which is used for pumping the water in boiler is
a) Feed check valve
b) Injector
c) Economiser
d) **Feed Pump**
43. Which of the following is application of Rope drive
a) Motor cycle
b) Bicycle
c) Car
d) **Crane**
44. The thickness of gear tooth is measured
a) **Along the pitch circle**
b) Along the addendum circle
c) Along the base circle
d) Along the root circle
45. Reducing pressure angle on gears results in
a) **Weaker teeth**
b) High velocity ratio
c) Stronger teeth
d) High efficiency
46. With increase in gravitational force, mass of substance will _____.
a) **Increase**
b) Remain constant
c) Decrease
d) May increase or decrease
47. During compression process which parameter will change?
a) Pressure
b) Density
c) Volume
d) **All of above**

48. The Steam generate in case of water tube boiler as compared to fire tube boiler is
- a) Same
 - b) **More**
 - c) less
 - d) None of above
49. The main function of an automobile gearbox is
- a) To reduce speed
 - b) **To provide variable speeds**
 - c) To increase speed
 - d) To increase power
50. When the circulation of water, in a boiler, is by a centrifugal pump, then the boiler is known as
- a) internally fired boiler
 - b) externally fired boiler
 - c) natural circulation boiler
 - d) **forced circulation boiler**