SAIL Mechanical enigneering questions and answers

 1. The unit of force in S.I. unit is

(a) kilogram

(b) newton   (Ans)

(c) watt

(d) dyne

2. The unit of work or energy in S.I. unit is

(a) newton

(b) pascal

(c) kilogram metre

(d) joule   (Ans)

3. The unit of power in S.I. unit is

(a) newton metre

(b) watt   (Ans)

(c) joule

(d) pascal per sec

4. Forces are called concurrent when their line

(a) one point   (Ans)

(b) two point

(c) one plane

(d) different planes

5. A force is completely defined when we specify

(a) magnitude

(b) direction

(c) point of application

(d) all the above   (Ans)

6. Which of the following is not the unit of distance ?

(a) angstrom

(b) light year

(c) micron

(d) milestone   (Ans)

7. Which of the following is not the unit of power ?

(a) kw (kilo watt)

(b) hp (horse power)

(c) k cal/sec

(d) k cal/kg sec   (Ans)

8. Which of the following is not the unit of work, energy and heat ?

(a) k cal

(b) kg m   (Ans)

(c) kwhr

(d) hp

9. Which of the following is not the unit of pressure ?

(a) kg/cm^2

(b) ata

(c) atmosphere

(d) newton   (Ans)

10. When trying to turn a key into lock, following is applied

(a) coplanar force

(b) non-coplanar force

(c) lever

(d) couple   (Ans)

11. Which of the following is not a scalar quantity ?

(a) time

(b) mass

(c) volume

(d) acceleration

12. Which of the following is a vector quantities ?

(a) energy

(b) mass

(c) momentum   (Ans)

(d) speed

13. Which of the following is not vector quantities ?

(a) weight   (Ans)

(b) velocity

(c) force

(d) moment

14. The unit of moment of inertia of an area are

(a) kg m^2

(b) m^4 (Ans)

(c) kg/m^2

(d) m^3

15. The unit of moment of inertia of mass are

(a) $kg\ m^2$ (Ans)

(b) m^4

(c) kg/m^2

(d) m^3

16. Which of the following is not the unit of energy ?

(a) kgm

(b) watt   (Ans)

(c) K cal

(d) kgm x (m/sec^2)

17. Which of the following is the example of lever of first order ?

(a) arm of man

(b) pair of scissors

(c) pair of the clinical tongs

(d) all of the above   (Ans)

18. A pair of Smith's Tong's is an example of the lever of

(a) zeroth order

(b) first order

(c) second order   (Ans)

(d) third order

19. Tension in a string is maximum at

(a) left support

(b) right support

(c) midway   (Ans)

(d) quarter span

20. Which of the following is the unit of energy ?

(a) joules

(b) N-m

(c) electron-volt

(d) all the above   (Ans)

21. The product of mass and velocity is known as

(a) work

(b) moment

(c) impulse

(d) momentum   (Ans)

22. For a m/c to be self locking its efficiency should be

(a) 100%

(b) >67%

(c) >50%   (Ans)

(d) more than 50%

23. A jet engine works on the principle of conservation

(a) energy

(b) mass

(c) linear momentum   (Ans)

(d) angular momentum

24. Work is equal to

(a) force x velocity

(b) force x time

(c) force x distance   (Ans)

(d) mass x acceleration

25. One N is equal to

(a) 10^7 dyne   (Ans)

(b) 10^6 dyne

(c) 10^4 dyne

(d) 10^3 dyne

26. Rate of change of momentum is proportional to the

(a) displacement

(b) velocity

(c) acceleration   (Ans)

(d) impressed force

27. The unit of momentum are same as of

(a) work

(b) energy

(c) force

(d) impluse   (Ans)