College of Applied Industrial Technology (CAIT)

كلية التطبيقات الصناعية

Exit Exam Questions Paper (MMET)

Academic Year 2022 – 2023 **(20232 Semester)**

DATE: Wed 8th of Feb 2023 **TIME ALLOWED**: 2 hrs **Phase:** Trial

FULL SCORE Attainable: **25 marks** Exit Exam Preparation and Media Subcommittee

Rubrics for Marking the Exit Exam:

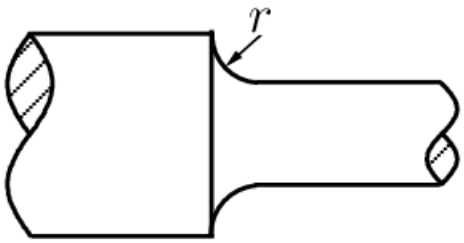
1- Right Choice(s)	1.00 Mark
2- 2 Choices with 1 Wrong Choice	0.75 Mark
3- 3 Choices with 1 Wrong Choice	0.50 Mark
4- 3 Choices with 2 Wrong Choices	0.25 Mark
5- More than 3 Choices	0.00 Mark
6- Wrong Choice(s)	0.00 Mark
7- No Answer	0.00 Mark

Choose the right answer(s) for the following questions using the provided answer sheet:

1. What is the type of the shown bearing?

   a) Deep Groove Ball Bearing
   b) Cylindrical Roller Bearing
   c) Angular Contact Ball Bearing
   d) Tapered Roller Bearing
   e) Journal (Sleeve) Bearing

2. The arrow is pointing to:



   a) Shaft fillet
   b) Shaft Chamfer
   c) Shaft diameter
   d) Shaft radius
   e) Shaft keyway

3. The magnitude of the friction force depends mainly upon the load perpendicular to the friction surface
   a) Not true
   b) Sometimes true
   c) Always true
   d) Depend upon the value of the friction force
   e) Depend upon the coefficient of friction

Don't answer here – Use the provided Answer Sheet

4. Fusion welding Processes include:

a) Spot welding.

b) Friction Welding.

c) Chemical Oxy-Acetylene welding.

d) All of the above.

5. Welding *electrodes are classified into following types:-*

a) Consumable Electrodes.

b) Non-*Consumable Electrodes*.

c) Fused Electrodes.

d) None of the above.

6. Cracks can be prevented by:

a) Avoid rapid cooling of the components after welding.

b) Pre-cooling components being welded.

c) Rapid cooling of the components after welding.

d) None of the above

7. A football match was held between Saudi Arabia and Argentina during FIFA World Cup in the year 2022. The mass of the football was 0.5 kg and kicked off with a velocity of 20 m/s. The kinetic energy of the football is

a) 125 J

b) 100 J

c) 140 J

d) 150 J

8. The energy possessed by a body for doing the work, by virtue of its position above the ground level is known as

a) Kinetic energy

b) Internal energy

c) Potential energy

d) Flow energy

9. The maximum efficiency of Carnot engine is

a) 100%

b) Less than 90 %

c) Between 90% and 90%

d) Less than 70%

Don’t answer here – Use the provided Answer Sheet

10. Which one of the following is used as a actuator in a hydraulic system?
    a) Cylinder
    b) Valve
    c) Strainer
    d) Pump

11. In a hydraulic system the fluid is compressed at a pressure of 10 bar and a volume of0.5 m^3. After compression, the pressure is increased to 25 bar. Assume the fluid is compressed at constant temperature, the final volume of the compressed fluid is
    a) 0.3 m^3
    b) 0.2 m^3
    c) 0.4 m^3
    d) 0.5 m^3

12. In pneumatic or hydraulic systems, pressure measurement is equivalent to
    a) Current
    b) Resistance
    c) Power
    d) Electrical voltage

13. Which of the following cycles uses air as the refrigerant
    a) Ericsson
    b) Stirling
    c) Carnot
    d) Bell-coleman

14. Name type of compressor as shown in the figure used in air conditioning system
    a) Rotary compressor
    b) Vane compressor
    c) Screw compressor
    d) Scroll compressor

15. The temperature in a domestic refrigerator is to be maintained at 263 K. The ambient air temperature is 303K. The coefficient of performance of a refrigerator is
    a) 5.575
    b) 7.575
    c) 4.575
    d) 6.575

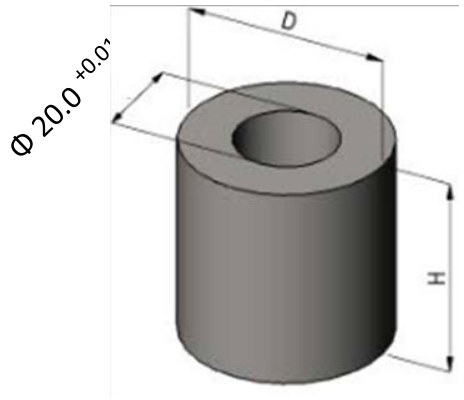
16. The Saudi Standards, Metrology and Quality Organization is named as -

a) JIS
b) ISO
c) SASO
d) DIN

17. In **mass production**, to verify ϕ 20.0 $^{+0.015}$

which measuring instrument will be most suitable-

a) Scale
b) Micrometer
c) Plug gauge (Go- No Go Gauge)
d) Vernier Caliper



18. Shaft diameter is specified in the drawing as ϕ25 $^{0.000/-0.015}$. If the measured value is 25.01, the shaft will be-

a) Rejected
b) Accepted
c) Accepted if total Length is maitained
d) Can not say

19. Work that has not been completed by the nominated date.

a) Backlog
b) Packing
c) Inspection
d) None

20. Vibrations and misalignments are examples of

a) Environmental failure
b) Chemical failure
c) Preventive maintenance
d) Mechanical failure

21. Seals are used to prevent_____

a) Rusting
b) Leakage
c) Noise
d) All the above

22. The symbol shown below indicates?

a) Dis-assemble
b) Replace
c) Assemble
d) Turn counter clock wise

23. A resource that can be totally replaced or is always available naturally, or that is practically inexhaustible is termed

a) Potential energy
b) Kinetic energy
c) Renewable energy
d) Flow energy

24. The major component of diesel engine power plant?

a) Air intake system
b) Fuel supply system
c) Both a and b
d) None of the above

25. The elements involved in operational cost?

a) Maintenance cost
b) Fuel and other supplier cost
c) Initial cost
d) Both a and b

Don’t answer here – Use the provided Answer Sheet

Best Wishes

Don’t answer here – Use the provided Answer Sheet