Question Paper Code: 42705

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

Second Semester

Computer Science and Engineering

14UME205 - BASIC CIVIL AND MECHANICAL ENGINEERING

(Common to EEE, ECE, EIE, ICE, MECH and IT)

(Regulation 2014)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 1 = 10 Marks)

1.	The first reading from a level station is			
	(a) fore sight	(b) intermediate sight	(c) back sight	(d) any sight
2.	Limestone is a (a) igneous		(c) metamorphic	(d) stratified
3.	The members which support covering material of a sloping roof are			
	(a) rafters	(b) purlins	(c) battens	(d) struts
4.	Which of the following materials is most elastic			
	(a) rubber	(b) plastic	(c) brass	(d) steel
5.	Economiser is used to l	neat		
	(a) Air	(b) Feed water		
	(c) Flue gases	(d) Al	l of the above	
6.	Which pump is not con	nes under the category of	f positive displaceme	nt pump?

(a) Gear pump	(b) Vane pump
(c) Axial piston pump	(d) Axial flow pump

7. The working cycle in case of four stroke IC engine is completed in following number of revolutions of crankshaft.

(a) $\frac{1}{2}$	(b) 1	(c) 2	(d) 4

8. Which device is the accessory of boiler?

	(a) Steam stop valve	(b) Economiser	(c) Blow-off cock	(d) Fusible plug
9. Which one is not the property of good refrigerant?				
	(a) Low freezing point		(b) High boiling point	
	(c) Low viscosity		(d) High critical pressure	
10. The value of COP in vapour compression cycle is				

(a) Always more than unity(b) Always less than unity(c) Equal to unity(d) None of the above

PART - B (5 x 2 = 10 Marks)

- 11. Write the principle of surveying.
- 12. What are the advantages of buttress dam compared to solid gravity dam?
- 13. State the functions of air pre heater and condenser.
- 14. What is meant by scavenging in two stroke engines?
- 15. Define "ton of refrigeration".

PART - C (5 x
$$16 = 80$$
 Marks)

16. (a) State the properties and uses of sand, cement, concrete and steel sections. (16)

Or

(b) (i) Explain with neat sketches prismatic compass surveying.	(12)
(ii) What are the various types of bricks based on quality?	(4)
17. (a) (i) Explain various kinds of rubble masonry with neat sketches.	(8)
(ii) Write short notes on columns.	(8)

Or

(b) Explain the different types of floors. (16)

18. (a) (i) Draw the layout of a steam power plant, explain its working principle.		(12)
	(ii) List the merits and demerits of hydroelectric power plant.	(4)

Or

(b) (i) With a neat sketch, explain the construction and working of a double acting reciprocating pump.	(10)
(ii) Explain about the various types of casing in centrifugal pump.	(6)
19. (a) (i) Explain the working of a four stroke diesel engine with a neat sketch.	(10)
(ii) Write briefly about the fuel supply system used in S.I engine.	(6)

Or

- (b) Explain the construction and working principle of any one of the boiler with neat sketches. (16)
- 20. (a) Explain with a neat sketch the construction and working of vapour compression refrigeration system. (16)

Or

(b) (i) Draw the neat diagram of a split air conditioning system and explain its working.

(10)

(ii) Differentiate the vapour compression and vapour absorption refrigeration system.

(6)