

Enrollment No.....

Bachelor of Engineering
Eighth Semester Main Examination, Aug-Sep 2020
Energy Management & Audit [ME-801(A)]
Branch-ME

Time: 3:00 Hrs

Max Marks 70

Note : (i) Attempt any five questions out of eight.
(ii) All questions carry equal marks.

- Q.1 (a) Define heat exchanger and heat pump.
(b) Define monitoring and targeting.
- Q.2 (a) What do you understand by fuel & energy substitution?
(b) What do you mean by concept of energy management?
- Q.3 (a) What do you mean by energy performance?
(b) What is banch making and energy cost?
- Q.4 (a) Define energy action and planing.
(b) Define method for preparin process.
- Q.5 (a) Explain energy efficient motors.
(b) Define cogeneration and waste heat recovery.
- Q.6 (a) Explain energy conservation in boiler.
(b) What is facility as an energy system?
- Q.7 (a) Data and information analysis in management.
(b) What is banch making and energy cost?
- Q.8 (a) Explain FBC.
(b) What is mean by HAVC?
(c) Duties and responsibilities of energy manager and auritor.
(d) Basic concept of energy management.

Enrollment No.....

Bachelor of Engineering
Eighth Semester Main Examination, Aug-Sep 2020
Machine Design [ME-802]
Branch-ME

Time: 3:00 Hrs

Max Marks 70

Note : (i) Attempt any five questions out of eight.
(ii) All questions carry equal marks.

- Q.1 What are the advantages and disadvantages of flat belt drive?
- Q.2 What is difference between double and herringbone helical gears? State advantages of these gear also.
- Q.3 Compare the stress distribution in an thin and thick walled pressure vessel.
- Q.4 Discuss the construction of wire rope with the help of net sketch?
- Q.5 What is optimization? Discuss different optimization techniques.
- Q.6 Determine the principal dimensions of cylinder for a vertical four stroke compression engine from the following data: Brake power : 5 kW Speed : 1000 rpm indicated mean effective pressure : 0.35 MPa mechanical efficiency : 85%
- Q.7 Design a cast iron protected flange coupling to connect two shafts of 36 mm diameter transmitting 25 kW at 950 rpm. The overload capacity is 1.3 times the average torque. The bolts and keys are made of C 20 steel and flanges are made of -FG250.
- Q.8 Determine the module and face width of a helical gear tooth for a helical gear pair to transmit a power of 20 kW from a shaft rotating at a speed of 1200 rpm to a parallel shaft to be 360 rpm maintaining a Centre distances of 180 mm.

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Bachelor of Engineering
Eighth Semester Main Examination, Aug-Sep 2020
Refrigeration and Air Conditioning [ME-803]
Branch-ME

Time: 3:00 Hrs

Max Marks 70

- Note : (i) Attempt any five questions out of eight.**
(ii) All questions carry equal marks.

- Q.1 Discuss the effect of suction pressure and supercharge on the performance of vapor compression system.
- Q.2 What is function of flash inter cooler provided in a compound vapor compression refrigeration system?
- Q.3 Explain two stage compression with inter cooling and sub cooling by external cooling source.
- Q.4 State the advantages and disadvantages of Electrolux refrigerator over conventional refrigerator

Q.5 Discuss the effect of suction pressure and supercharge on the performance of vapor compression system.

Q.6 Describe with a line diagram and T-S diagram about regenerative air refrigeration.

Q.7 State the factor that determine human comfort sketch comfort chart and show on it the comfort zone.

Q.8 State the properties and used of the following refrigerants-

(i) Ammonia

(ii) Carbon-dioxide

(iii) R-12

Enrollment No.....

Bachelor of Engineering
Eighth Semester Main Examination, Aug-Sep 2020
CAD/ CAM/ CIM [ME-804]
Branch-ME

Time: 3:00 Hrs

Max Marks 70

- Note:**
- i) Attempt any five questions out of eight.**
 - ii) All questions carry equal marks.**
 - iii) Answer should be precise & to be point only.**
 - iv) Assume suitable data if necessary & state them clearly.**

Q.1 What are the G and M codes? Explain with example?

Q.2 What is mean by swap?

Q.3 What are various data exchange system? Explain in brief?

Q.4 Different between DNC & CNC machine.

Q.5 Discuss the batch and job shop production system.

Q.6 What do you understand by the term rapid prototyping? Explain in brief.

Q.7 Explain the concepts flexible manufacturing system.

Q.8 Describe the need of CIM and the issue addresses by CIM.