

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

II B.TECH I SEMESTER SUPPLEMENTARY EXAMINATIONS, MAY-2019Subject: Mechanical Technology

Branch: MINING

Time: 3 hours

Max. Marks: 60

PART – A

Answer ALL questions of the following

5x2Marks=10 Marks

1. Why Roller follower is preferred over knife edge follower.
2. Discuss velocity ratio of the belt.
3. Explain the gear terminology Addendum and Dedendum.
4. List the important functions of carburetor.
5. Define positive displacement compressor and list out various positive displacement compressor.

PART-B

Answer any FIVE Questions of the following

5x10 Marks= 50Marks

1. Define the term Dwell period in Cams. Draw and explain the displacement and velocity diagram for simple harmonic motion.
2. a) What is meant by the pressure angle of cam? Upon what factors does it depend? [4]
b) State the procedure to the profile of a cam when the form of the displacement curve for the follower is known. [6]
3. a. State the Advantages and disadvantages of chain drive over belt drive.
b. What is the basic difference between chain drive & belt drive?
4. a) Define i) Pitch of the chain ii) Pitch circle diameter of chain sprocket.
b) State and explain classification of chain
5. a) What are the advantages of Computer Numerical Control machines over conventional machines?
b) Write any three differences between NC and CNC machines.
6. a) Explain the working principle of grinding machine.
b) Explain the construction and principle of working of a column and knee type milling machine with neat sketch.
7. a) With the help of neat sketch explain the construction and working of lathe machine. [6]
b) Define : i) Brake thermal efficiency ii) Volumetric efficiency [4]
8. a) What is the significance of free air delivered in air compressors?
b) What are the advantages of inter cooling in air compressors?

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II B.TECH I SEMESTER SUPPLEMENTARY EXAMINATIONS, MAY-2019Subject: Applied Electrical & Electronics Engineering

Branch: MINING

Time: 3 hours

Max. Marks: 60

PART – A

Answer ALL questions of the following

5x2Marks=10 Marks

1. What are the advantages of inserting external resistance in the rotor circuit of a wound rotor induction motor at the time of starting?
2. How arc is initiated in Circuit Breaker?
3. What is the difference between CISC and RISC.
4. Where do memory source and destination addresses reside in string Instructions?
5. Write an ALP to multiply two 8-bit numbers.

PART-B

Answer any FIVE Questions of the following

5x10 Marks= 50Marks

1. a) Explain the Ward-Leonard method of Speed control of dc motor with neat diagram?
b) Write short notes on cascading of Induction motors?
2. a) What is the effect of injecting voltage in the motor circuit of an induction motor?
b) Give the significance of induction motors. Write the applications of 3- ϕ and 1- ϕ induction motors in Industries also write the necessary control action.
3. a) With the help of neat block diagram, explain the working of expulsion type lightning arrester?
b) Distinguish between FUSE and a Protective Relay.
4. a) What is meant by restriking voltage and recovery voltage? Explain briefly.
b) Define power cables. Write the difference between over-head and underground cables.
5. a) What are advantages and applications of microprocessors?
b) Describe the conventional speed control techniques employed for AC motors.
6. a) State the different FLP enclosures for hazardous area equipment?
b) Derive the torque expression for 1- ϕ induction motor.
7. a) Draw the architecture of 8085 and mention its functional blocks?
b) Draw the appearance of data in the read, write machine cycles?
8. a) Write ALP to find largest of given numbers.
b) Write ALP to find dividend of two numbers.

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Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad**II B.TECH I SEMESTER SUPPLEMENTARY EXAMINATIONS, MAY-2019**Subject: Machine DrawingBranch: **Common to ME & MINING**

Time: 3 hours

Max. Marks: 60

PART – A

Answer any TWO Questions

2 x 10 Marks = 20 Marks

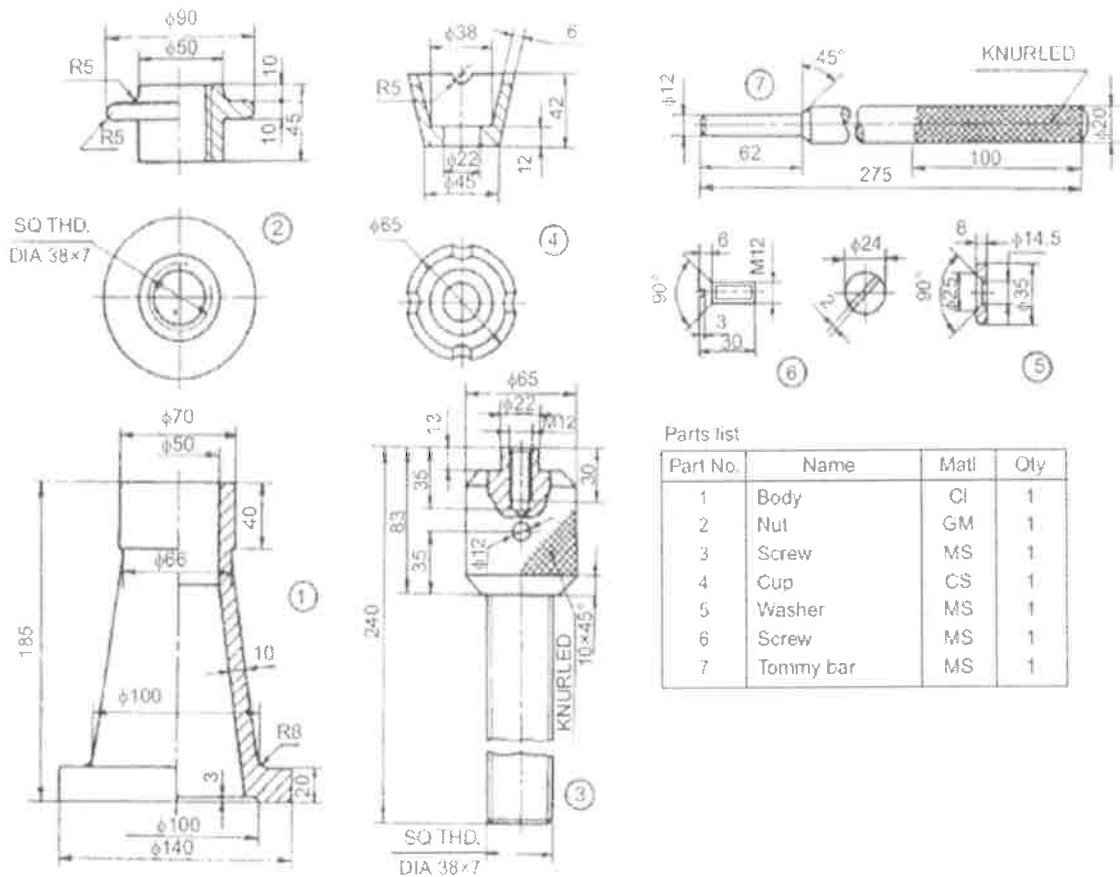
1. Sketch a flanged coupling showing the sectional front view and side view to connect two rods of 25 mm diameter.
2. Sketch the schematic representation of threaded parts.
 - a) V – threads
 - b) Square threads.
3. Draw the double riveted double strap Zig-Zag Butt joint to join 12mm plates.

PART – B

Answer the following Question

1x40 Marks=40Marks

1. Assemble all parts of the screw jack, shown in Fig. and draw the following views:
 - (i) Half sectional view from the front and top view.

**SCREW JACK**

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II B.TECH I SEMESTER SUPPLEMENTARY EXAMINATIONS, MAY-2019Subject: **Human Values and Professional Ethics**Branch: **Common to CE, ME & MINING****Time: 3 hours****Max. Marks: 60****PART – A**Answer **ALL** questions of the following**5x2Marks=10 Marks**

1. What is empathy?
2. Define Empathy and Self- Confidence.
3. Explain the importance of commitment.
4. How do you differentiate Right and Wrong?
5. How to maintain relationship with family?

PART-BAnswer any **FIVE** Questions of the following**5x10 Marks= 50Marks**

1. a) Discuss the stages of Lawrence Kohlberg's theory of moral development.
b) What is moral inquiry? Discuss the various types of moral inquiry.
2. a) What is engineering ethics? Explain the different core values.
b) Define character. What role does the character play in the conduct of an individual?
3. a) "Honesty is the best policy". Comment and explain how it is favorable to an engineering student to make the career.
b) What is Work Ethic? Explain its significance in the engineering field.
4. a) "Choosing a goal and sticking to it-changes everything". Comment
b) Differentiate between Honesty and Courage.
5. a) Define a Goal and discuss the purpose of goal setting.
b) Write short notes on types of goals and smarter goals.
6. Write short notes on: a) Valuing Time b) Customs and religion
7. a) Write a note on human-human relationships.
b) Write a note on humanistic education in detail.
8. a) What are the foundational values of relationships? How can they be used to ensure strong and mutually relationships?
b) What are the values in interaction of human beings with the material things? Give one example of each.