

Printing Pages : 1

Paper Code : - BME-611-S

(A) (SVSU) : 2023-2024/R/S

Enrollment No.

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B. TECH. (ME)
III YEAR/VI SEMESTER EXAMINATION
I.C ENGINE & GAS. TURBINE

[Time : 3:00 Hours]

[Max. Marks : 70]

NOTE: ATTEMPT ALL THE QUESTIONS AS PER GIVEN INSTRUCTIONS.

1. Attempt any TWO parts of the followings. [7x2=14]
 - a) Discuss the effects of engine emissions on human health.
 - b) Draw and explain the valve timing diagram for 4-stroke petrol engine.
 - c) What is supercharging? Why it is done and what are supercharging limits for CI engine?
2. Attempt any TWO parts of the following. [7x2=14]
 - a) Evaluate the working of MPFI and its different types with the help of neat and clean diagrams.
 - b) Summarize the requirements of a good cooling System and compare air and liquid cooling system in brief.
 - c) Discuss the alternative fuels for IC engines also discuss the rating for SI engine fuel.
3. Attempt any TWO parts of the following: [7x2=14]
 - a) Demonstrate combustion process and its phases in CI engine with neat sketch.
 - b) Discuss an expression for thermal efficiency of air standard Otto Cycle.
 - c) Describe the main components and working of battery ignition system with neat sketch.
4. Attempt any TWO parts of the following: [7x2=14]
 - a) Explain the function of lubricants in I.C. Engines. Explain different wet lubricating system with neat sketch.
 - b) What is difference between reciprocating and centrifugal compressor?
 - c) Draw sketches showing the constructional features of different type of nozzle used in automobile diesel engine and explain the function of each.
5. Attempt any TWO parts of the following: [7x2=14]
 - a) What are the major sources of air pollutants? Classify the pollution control devices used in C. I. engine?
 - b) Explain the effect of compression ratio, engine speed, and spark advance on the knocking in SI engine.
 - c) Explain the working and construction of simple carburetor.

Printing Pages : 1

Paper Code BME-623

(C) (SVSU:2022-2023/R)

ENROLLMENT NO.

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B.TECH. (ME)

3RD YEAR, 6TH SEMESTER EXAMINATION

COMPUTER AIDED DESIGN

[Time: 3:00 Hrs.]

Max. Marks:70]

NOTE:- ATTEMPT ALL THE QUESTIONS AS PER GIVEN INSTRUCTIONS.

QUESTION NO.-1: ATTEMPT ANY FOUR PARTS.

(4*3=12)

a)	Differentiate between input and output devices with suitable examples.
b)	Explain the CRT components & its uses.
c)	Discuss the importance & advantage of Computer Aided Design.
d)	What are the benefits of CIM?
e)	Give brief descriptions of Graphics, computer graphics?
f)	Define Widowing & clipping in Graphic transformation

QUESTION NO.-2: ATTEMPT ANY THREE PARTS.

(3*4=12)

a)	Define the graphics software.
b)	Explain the working of Liquid Crystal Displays & LED.
c)	Define software standard. Also explain the importance of color Model in CAD/CAM
d)	Enlist the Various cursor control Devices. Discuss windowing & clipping

QUESTION NO.-3: ATTEMPT ANY THREE PARTS.

(3*6=18)

a)	Explain the Concept of Concurrent Engineering and why is it important?
b)	Define the Graphics Translation, Scaling, and Rotation with example?
c)	Write short notes on followings. Blobby objects ii) Super quadric surface iii) Constructive solid geometry iv) Solid Modeling
d)	Define LCS, UCS, WCS, PDCS, and NDCS Command.

QUESTION NO.-4: ATTEMPT ANY TWO PARTS.

(2*7=14)

a)	What are the various types of sweeps used in solid modelling? Explain with the help of examples
b)	Explain the use of following commands in Auto CAD. Hatch, Text, Move, Copy, Rotate, Mirror.
c)	Briefly describe various types of Curve.

QUESTION NO.-5: ATTEMPT ANY TWO PARTS.

(2*7=14)

a)	Explain constructive solid geometry. What is the role of Primitives and Boolean operations in CSG? Explain with suitable examples.
b)	Explain stapes of sequential & concurrent egg. Problems & benefits.
c)	Explain the Software & hardware requirements of CAD.
d)	Explain the Digital Differential Analyzer (DDA).-
