



Roll No. 22EGJC5099

GLOBAL INSTITUTE OF TECHNOLOGY
B. Tech. I Semester, II Midterm Exam 2022
1FY3-07/ Basic Mechanical Engineering
Branch:- Common for section A & B

02-03-23/ Thursday

Time: 3 Hours

Maximum Marks: 70

Attempt all questions

Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. No supplementary sheet shall be issued in any case.

Part A (Answer should be given up to 25 words only)

All questions are compulsory

- Q.1 Define Slip of belt. (CO3)
- Q.2 Differentiate between single and double acting reciprocating pump. (CO3)
- Q.3 Enlist different types of pattern. (CO5)
- Q.4 Mention the role of spark plug in S.I. engine. (CO4)
- Q.5 Classify lubrication system in I C Engines. (CO4)
- Q.6 Define TR, and find value of ITR. (CO3)
- Q.7 Define case hardening process. (CO5)
- Q.8 The cubic capacity of a four stroke spark – ignition engine is 245 cc. The clearance volume is 27.2 cc. Calculate the compression ratio. (CO4)
- Q.9 Define C.O.P. and write the formula for it. (CO3)
- Q.10 Write Necessity of cooling system in I C engines. (CO4)

10 x 2 = 20

Part B Analytical/Problem solving questions

Attempt all questions (word Limit 100)

- Q.1 Differentiate between 2-stroke and 4-stroke I C engines with diagram. (CO4)
- Q.2 Explain different metal forming processes with neat sketch. (CO5)
- Q.3 Derive suitable expression for length of open belt drive. (CO3)
- Q.4. Differentiate between welding, soldering and brazing. (CO5)
- Q.5 Explain working of reciprocating pump with the help of labelled diagram. (CO3)

5 x 4 = 20

Part C (Descriptive/Analytical/Problem Solving/Design Question)

Attempt all questions

- Q.1 Draw schematic diagram and explain working of Vapour Absorption Refrigeration Cycle. (CO3)
- Q.2 Explain complete foundry operation with help of required diagrams. (CO5)
- Q.3 Draw and explain working of 4-stroke SI and CI engines. (CO4)

3x 10 = 30