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R 38
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DIL HOLE . φ4
37
16
15
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44
φ36   φ25   φ35
φ50
22
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6   φ6
SNUG
φ6
37
R 12
2 HOLES , φX)
10
5
2
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7
M 10
CRS.62
44
13
3
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R19
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=
8   50.20   2   6   8
CRS.134
SNUG HOLE φ . DEEP 6
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76
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40
SQ . 19.5
37
170
1
22
16
DETAILS OD A φ 25 PLUMMER
BLOCK OR PEDESTAL DEARING

Q.22 A cam is to give the following motions to a knife edge follower.
a) Outstroke during $60°$ of cam motion.
b) Dwell for the next $30°$ of cam rotation.
c) Return stroke during next $60°$ of cam rotation.
d) Dwell for the remaining $210°$ of cam rotation.
The stroke of the follower is 50 mm & the min, radius for the cam is 55 mm . The follower moves with uniform velocity during both the outstroke & return stroke. Draw the profile of the cam when the axis of the follower offset by 25 mm from the axis of the cam shaft. (CO1)

(320)   (4)   180345

4th Sem / Auto
Subject:- Automobile Engineering Drawing

Time : 3Hrs.   M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory   (10x1=10)

Q.1 _____ is the difference between the size of the manufactured product and the corresponding basic size   (CO3)
a) Deviation   b) Upper deviation
c) Actual deviation   d) Allowance

Q.2 Upper deviation is the algebraic difference between the _____ and corresponding basic size.   (CO3)
a) actual size
b) minimum limit of the size
c) maximum limit of the size
d) design size

Q.3 Lower deviation is the algebraic difference between the _____ and corresponding basic size.   (CO3)
a) actual size
b) minimum limit of the size
c) maximum limit of the size
d) design size

Q.4 Maximum clearance is the difference between _____ size of the hole and the _____ size of the shaft.   (CO3)

(1)   180345

a) minimum, maximum
b) minimum, minimum
c) maximum, maximum
d) maximum, minimum

Q.5 Which are the combination of stresses acting on the connecting rod? (CO1)
a) Shear and torsion
b) Torsion and tensile
c) Tensile
d) Axial and bending stresses

Q.6 Which of the following helps in the Uniform speed of crankshaft despite uneven power impulses of the engine cylinder?
a) Piston   b) Connecting rod
c) Gasket   d) Flywheel

Q.7 Which of the following material is the most commonly used in the construction of crankshaft? (CO2)

a) Cast steel   b) Bronze
c) Copper   d) lead

Q.8 An automobile chassis does not include which one of the following parts? (CO1)
a) Shock absorbers   b) Steering system
c) Differential   d) Brakes

Q.9 Pressure angle is_____ in case of cycloidal teeth. (CO2)

a) Constant   b) Variable
c) zero   d) None of the listed

Q.10 The angle between the direction of the follower motion and a normal to the pitch curve is called (CO2)

a) pitch angle   b) prime angle
c) base angle   d) pressure angle

SECTION-B

Note: Attempt any five questions, each carries two marks
(2x5=10)

Q.11 Write any two types of cam motions. (CO2)
Q.12 List the two types of lighting system. (CO2)
Q.13 Define circular pitch of gear. (CO2)
Q.14 Write the relation between diameteral pitch and circle diameter (PCD). (CO3)
Q.15 Define dwell in case of cam. (CO1)
Q.16 Name the coils used in transformer of battery ignition system. (CO2)

SECTION-C

Note: Draw free hand sketch of any two. (10x2=20)
Q.17 Wheel cylinder (CO1)
Q.18 Battery ignition system. (CO1)
Q.19 Leaf spring suspension (CO1)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (30x2=60)

Q.20 Draw the profile of involute teeth by approximate method having 30 teeth, circular pitch 24mm and pressure angle 22°. Draw atleast three teeth. (CO1)

Q.21 Details of Plummer block is shown in Fig.1
Assemble all these parts and draw following view:-
i) Front elevation right half in section
ii) Side view left half in section
iii) Top view (CO2)