



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – Dip.ME-2021

Course Name – Design of Machine Elements

Course Code - DME602

(Semester VI)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Select Factor of safety is defined as the ratio of
- | | |
|---|--|
| a) Ultimate stress / Permissible stress | b) Compressive stress / Tensile stress |
| c) Ultimate stress / Shear stress | d) Tensile strain / Compressive stress |
- (ii) Identify the material which has maximum ductility
- | | |
|---------------|--------------|
| a) Mild steel | b) Nickel |
| c) Copper | d) Aluminium |
- (iii) Choose the percentage of carbon in cast iron varies from
- | | |
|---------------|---------------|
| a) 0.1 to 0.5 | b) 0.5 to 1 |
| c) 1 to 1.7 | d) 1.7 to 4.5 |
- (iv) Select Slenderness ratio is defined as the ratio of
- | | |
|---|---|
| a) maximum size of column to minimum size of column | b) effective length of column to width of column |
| c) width of column to depth of column | d) effective length of column to least radius of gyration of the column |
- (v) Select the pipe joint, mostly used for pipes carrying water at low pressures
- | | |
|-----------------|----------------------------|
| a) socket joint | b) spigot and socket joint |
| c) union joint | d) nipple joint |
- (vi) Choose the application of Cotter joints
- | | |
|--------------------------------------|-----------------------|
| a) Axial tensile or compressive load | b) Axial tensile load |
| c) Axial compressive load | d) Twisting load |
- (vii) Choose the application of bushed-pin type flange coupling
- | | |
|---|---|
| a) For intersecting shafts | b) For small shafts rotating at slow speeds |
| c) When the shafts are not in exact alignment | d) For parallel shafts |
- (viii) Choose the application of Maximum principle stress theory
- | | |
|---------------------|-------------------|
| a) Cast iron shafts | b) Steel shafts |
| c) Aluminum shafts | d) Plastic shafts |

