

QUESTION BANK

SUB: BASIC CIVIL ENGINEERING
SEM: I SEM /II SEM

SUB CODE: 19KBBCV13/23

MODULE -01

2 marks questions

- Q1.)** Write a short note on Surveying.
Q2.) Write a short note on Building Materials.
Q3.) Write a short note on Construction Technology.
Q4.) Write a short note on Geotechnical Engineering.
Q5.) Write a short note on Structural Engineering.
Q6.) Write a short note on Hydraulics.
Q7.) Write a short note on water resource and irrigation engineering.
Q8.) Write a short note on Transportation Engineering.
Q9.) Write a short note on Environmental Engineering.

4 marks questions

- Q10.)** Write a short note on
(1) Surveying (2) Building Materials
Q11.) Write a short note on
(1) Construction Technology (2) Geotechnical Engineering
Q12.) Write a short note on
(1) Structural Engineering (2) Hydraulics
Q13.) Write a short note on
(1) Transportation Engineering (2) Environmental Engineering
Q14.) Write a brief note on scope of any two different fields of Civil Engineering.

6 marks questions

- Q15.)** Write a brief note on the following
(1) Construction Technology (2) Geotechnical Engineering (3) Surveying
Q16.) Write a brief note on the following
(1) Building Materials (2) Environmental Engineering (3) Hydraulics
Q17.) Write a brief note on the following
(1) Water resource Engineering (2) Transportation Engineering (3) Structural Engineering
Q18.) Write a brief note on scope of any three different fields of Civil Engineering.
Q19.) Explain the role of civil engineer any six points.

8 marks questions

- Q20.)** Write a brief note on the following
(1) Environmental engineering (2) Geotechnical Engineering (3) Surveying
(4) Hydraulics
Q21.) Write a brief note on the following
(1) Water resource Engineering (2) Hydraulics (3) Structural Engineering
(4) Construction Technology

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Q22.) Write a brief note on scope of any four different fields of Civil Engineering.

Q23.) Describe any eight points of the role of a civil engineer.

10 marks questions

Q24.) Briefly give the scope of different fields in Civil Engineering.

Q25.) Briefly explain the role of civil engineer in the infrastructural development of a country.

Q26.) Explain the impact of infrastructural facilities on Socio-economic development of a Country.

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MODULE -02

2 marks questions

- Q1.)** Define a Road.
Q2.) Define a bridge.
Q3.) Define a culvert.
Q4.) Define a dam.
Q5.) Define a flexible pavement.
Q6.) Define a Rigid Pavement.
Q7.) What is a storage dam.
Q8.) List the types of culverts.
Q9.) List the type of dams.

4 marks questions

- Q10.)** Write a short note on
(1) Pipe culvert (2) Arch culvert
Q11.) Write a short note on
(1) Pipe arch culvert (2) Box culvert
Q12.) Write a short note on
(1) RCC bridge (2) Steel bridge
Q13.) Write a short note on
(1) Bridge Culvert (2) Deck bridge
Q14.) State any four advantages of Flexible pavement.

6 marks questions

- Q15.)** Write a brief note on the following
(1) Box culvert (2) RCC bridge (3) Deck bridge
Q16.) Write a brief note on the following
(1) Pipe culvert (2) Pipe arch culvert (3) Bridge Culvert
Q17.) Write a brief note on the following
(1) Flexible pavement (2) Gravity dam (3) Earthen dam
Q18.) With a neat sketch explain Steel Bridge.
Q19.) With a neat sketch explain Deck Bridge.

8 marks questions

- Q20.)** With a neat sketch explain rock fill dam.
Q21.) Write a brief note on the following
(1) Bascule bridge (2) skew bridge (3) square bridge (4) Beam and Slab Bridge
Q22.) With a neat sketch explain through bridge and semi-through bridge.
Q23.) Describe gravity dam and with a neat sketch label the party of a bridge.

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10 marks questions

Q24.) Explain the classification of roads based on location and their functions.

Q25.) With neat sketch explain the types of bridges depending upon the position of floor of the Superstructure.

Q26.) With a neat Sketch explain RCC and Composite Bridges.

Q27.) Briefly explain different types of dams based on materials, Hydraulic design and Use.

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MODULE -03

2 marks questions

- Q1.)** Write the uses of stones.
Q2.) Write the uses of bricks.
Q3.) Write the uses of cement.
Q4.) Write the uses of steel.
Q5.) Define cement.
Q6.) What is first class brick.
Q7.) What is sundried brick.
Q8.) What is metamorphic rock.
Q9.) What is igneous rock.

4 marks questions

- Q10.)** Write a short note on
(1) Sedimentary rocks (2) Third class bricks
Q11.) Write a short note on
(1) Burnt bricks (2) Fourth class bricks
Q12.) Write a short note on
(1) Alumina (2) Oxides of iron
Q13.) Write a short note on
(1) Magnesia (2) Silica
Q14.) What are the good qualities of bricks.

6 marks questions

- Q15.)** Write a brief note on the following
(1) Igneous rocks (2) Stratified rocks (3) unstartified rocks
Q16.) Write a brief note on the following
(1) Silica (2) Alumina (3) Fourth class bricks
Q17.) Write a brief note on the following
(1) Oxides of iron (2) Burnt bricks (3) Unburnt bricks
Q18.) Explain the composition of bricks.
Q19.) Explain the properties of cement.

8 marks questions

- Q20.)** Explain the composition of ordinary cement.
Q21.) Explain the composition of bricks
Q22.) Explain the properties of hard steel.
Q23.) Distinguish between hard steel and mild steel.

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10 marks questions

Q24.) Explain the classification of stones and mention its uses.

Q25.) Explain the classification of bricks and mention its uses.

Q26.) Explain the functions of cement and mention its uses.

Q27.) Explain the Properties of Mild steel and mention its uses.

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MODULE -04

2 marks questions

- Q1.)** Define a particle.
- Q2.)** Define continuum force.
- Q3.)** Define rigid body.
- Q4.)** Define force.
- Q5.)** Define moment.
- Q6.)** Define a couple.
- Q7.)** Define a coplanar force.
- Q8.)** Define a collinear force.
- Q9.)** What is parallel force.

4 marks questions

- Q10.)** Write a short note on
(1) Moment. (2) Continuum force
- Q11.)** Write a short note on
(1) Parallel force. (2) Rigid body.
- Q12.)** Write a short note on
(1) Converging force (2) Diverging force
- Q13.)** Explain principle of physical independence.
- Q14.)** Explain principle of transmissibility of force.

6 marks questions

- Q15.)** Write a brief note on the following
(1) Particle. (2) Continuum force. (3) Rigid body.
- Q16.)** Write a brief note on the following
(1) Parallel force. (2) Unparallel force. (3) Concurrent force
- Q17.)** Write a brief note on the following
(1) Non-concurrent force (2) Point force (3) principle of superposition
- Q18.)** Explain the characteristics of couple.
- Q19.)** Explain elements or characteristics of force.

8 marks questions

- Q20.)** Explain Newton's laws of motion.
- Q21.)** With an example explain principle of transmissibility of force.
- Q22.)** Explain equivalent system.
- Q23.)** Explain the method to resolve any coplanar concurrent system.

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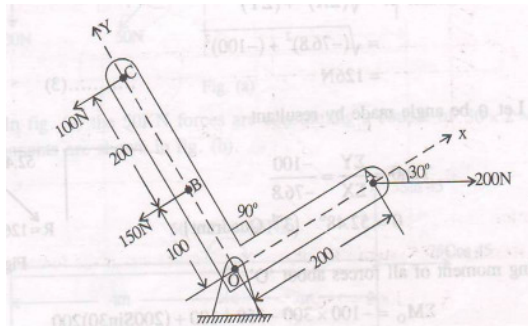
10 marks questions

Q24.) Explain the classification of force system.

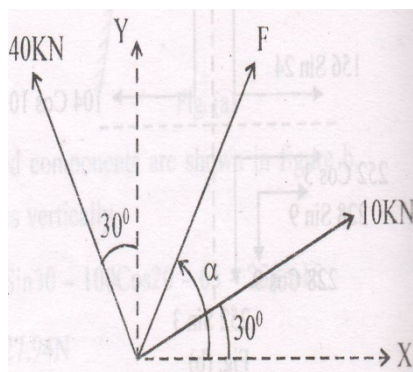
Q25.) State and Prove Parallelogram law of forces.

12 marks questions

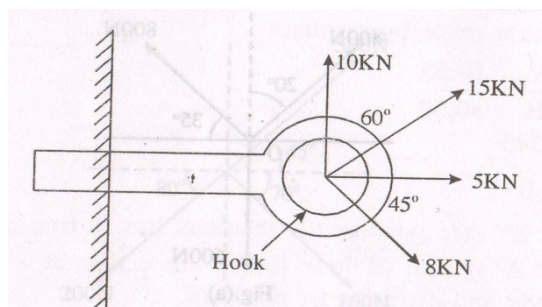
Q26.) Three external forces are acting on a L-shaped lever as shown in. Determine the equivalent system through O as shown in below fig.



Q27.) Find the magnitude and direction of force F if the resultant is 72KN and is acting along Y-axis as shown in below fig.



Q29.) Find the value of resultant of the system of forces as shown in the below fig.

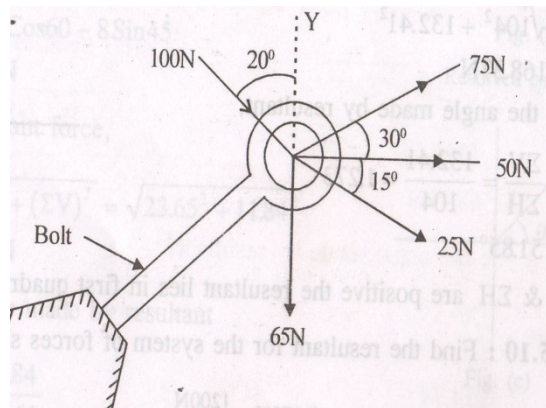


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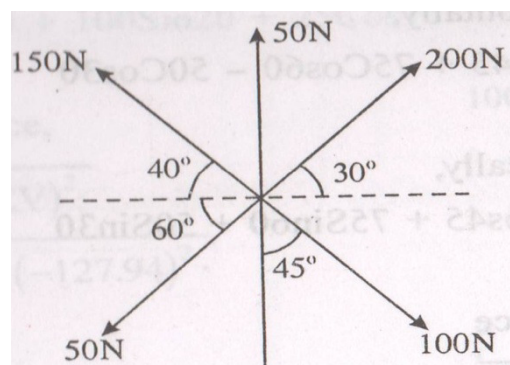
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Q28.) Find the forces on a bolt as shown in the below fig. Determine the resultant of forces on the bolt.



Q29.) A system of forces are acting on a body as shown in the below fig. Determine the magnitude and direction of the resultant.



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MODULE -05

2 marks questions

- Q1.)** Define an equilibrant.
- Q2.)** Define centroid.
- Q3.)** Define centre of gravity.
- Q4.)** Define resultant of force.
- Q5.)** Define axis of reference.

4 marks questions

- Q6.)** Write a short note on
 - (1)** Centroid.
 - (2)** Centre of gravity
- Q7.)** Write a short note on
 - (1)** Equilibrant.
 - (2)** Axis of reference.

6 marks questions

- Q8.)** State the conditions of static equilibrium.
- Q9)** State the points to solve on equilibrium of coplanar concurrent and non-concurrent system.

8 marks questions

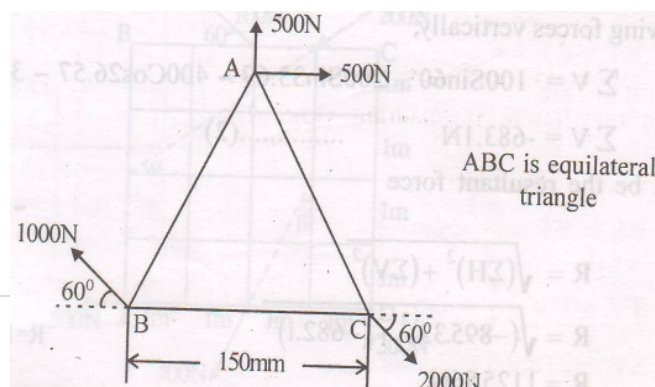
- Q10.)** Derive an expression for the centre of gravity of a plane figure.
- Q11.)** Derive an expression for the centroid of a triangle.
- Q12.)** Derive an expression for the centroid of a quarter circle of radius 'r'.

10 marks questions

- Q13.)** State and prove Lami's Theorem.
- Q14.)** Derive an expression for the centroid of a semicircle of radius 'r'.
- Q15.)** Derive an expression for the centroid of a circular sector.
- Q16.)** Determine the centroid of a right angle triangle of base 'b' and height 'h' from first Principle.

12 marks questions

- Q17.)** Determine the resultant and equilibrant of the forces acting as shown in the below fig.

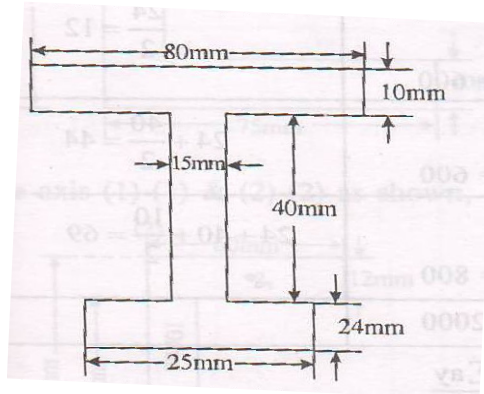


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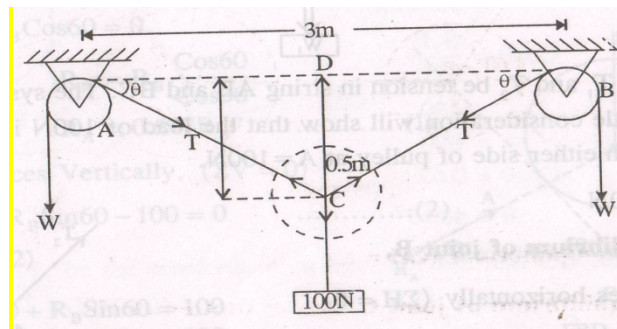
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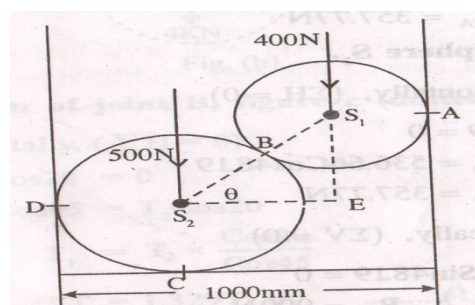
Q18.) Locate the centroid of the I-section as shown in the below fig.



Q19.) Find the value of W which is required to maintain equilibrium configuration as shown in the below fig.



Q20.) A horizontal channel with an inner clearance of 1000mm carries two spheres of radius 350mm and 250mm whose weights are 500N and 400N respectively. Find the reactions at all contact surfaces as shown in the below figure.

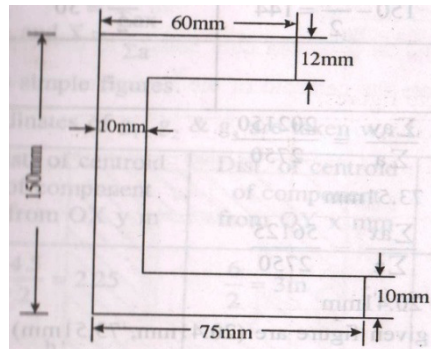


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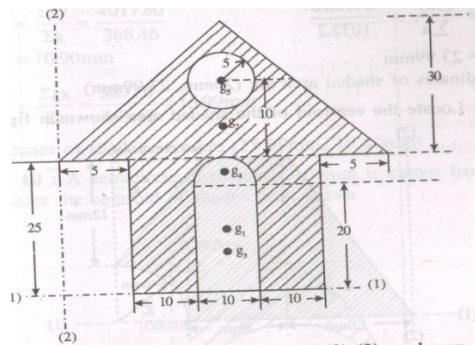
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Q21.) Locate the centroid of the C-section as shown in the below fig.



Q22.) Locate the centroid of the shaded area as shown in the below fig



Q23.) A semicircle of diameter 100mm is cut out from a quarter circle of radius 100mm. Locate the centroid of the shaded area as shown in the below fig.

