**SAMPLE QUESTION BANK**

**Program: BE (Mechanical Engineering)**

Curriculum Scheme: **Rev2019 C Scheme**

**Subject- Press Tool Design Course code- MEDLO6021**

**MCQ- SAMPLE SET**

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| 1. | Following operation is used for cutting very small holes very close together in a workpiece. |
| Option A: | Shaving |
| Option B: | Perforating |
| Option C: | Lancing |
| Option D: | Trimming |
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| 2. | As the thickness of sheet is increased the clearance needed will also? |
| Option A: | First decreases and then Increase |
| Option B: | Decrease |
| Option C: | Increase |
| Option D: | No effect |
|  |  |
| 3. | In presses, die block is mounted on following element |
| Option A: | Upper Shoe |
| Option B: | Lower Shoe |
| Option C: | Stripper plate |
| Option D: | Stock guide |
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| 4. | In Piercing operation the clearance is provided on following element |
| Option A: | On die |
| Option B: | 50% on punch and 50% on die |
| Option C: | On Punch |
| Option D: | On die or punch depending upon designer’s choice |
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| 5. | In blanking operation the shear is provided on following element |
| Option A: | On Punch |
| Option B: | Punch holder |
| Option C: | On die |
| Option D: | Stripper plate |
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| 6. | The value of the scrap bridge for 2mm material thickness is following |
| Option A: | 0.8mm |
| Option B: | 2mm |
| Option C: | 3.2mm |
| Option D: | 5mm |
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| 7. | A device which is used to advance the strip in a correct distance over a die is called |
| Option A: | Stock guide |
| Option B: | Pilots |
| Option C: | Stock stop |
| Option D: | Knockout plate |
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| 8. | The angle of inclination is given on a die or punch for reducing cutting forces is called as |
| Option A: | Straggering of punches |
| Option B: | Relief angle |
| Option C: | Angle of Shear |
| Option D: | Taper angle |
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| 9. | layout the position of the workpieces in the strip and their orientation with respect to one another is called as |
| Option A: | Feed layout |
| Option B: | Design layout |
| Option C: | Plant layout |
| Option D: | Scrap strip layout |
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| 10. | The centroid of the line perimeter of the blank while laying out the punch on punch holder is called as |
| Option A: | Angle of Pressure |
| Option B: | blank centroid |
| Option C: | Centre of pressure |
| Option D: | deflection of punch |
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| 11. | If depth of formed cup is up to half its diameter the process is called …. |
| Option A: | Forced drawing |
| Option B: | Hollow drawing |
| Option C: | Deep drawing |
| Option D: | Shallow drawing |
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| 12. | Springback in sheet metal bending depends on the |
| Option A: | Elastic limit |
| Option B: | Bend radius |
| Option C: | Degree of bend |
| Option D: | Thickness of sheet |
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| 13. | When sheet metal is to be bend at an angle from its edge then the process is called? |
| Option A: | V-bending |
| Option B: | Edge bending |
| Option C: | U-bending |
| Option D: | V and edge bending |
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| 14. | Wrinkling is a common defect found in |
| Option A: | Bent components |
| Option B: | Deep drawn components |
| Option C: | Embossed components |
| Option D: | Blanked component |
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| 15. | Which of the following forming processes is suitable for making utensils and cup shaped objects? |
| Option A: | Forging |
| Option B: | Rolling |
| Option C: | Deep drawing |
| Option D: | Wire drawing |
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| 16. | "In compound dies........." |
| Option A: | Two or more cutting operations can be performed simultaneously |
| Option B: | Cutting and formation operations are combined and carried out in single operation |
| Option C: | Workpiece moves from one station to other with separate operation performed at each station |
| Option D: | Only one operation is performed at each stroke of the ram |
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| 17. | The die which is used to roll the material into a curved shape. |
| Option A: | Shaving die |
| Option B: | Trimming die |
| Option C: | Curling die |
| Option D: | Simple die |
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| 18. | Which of the following die can perform multiple operations such as blanking, punching, notching etc.? |
| Option A: | Simple dies |
| Option B: | Progressive dies |
| Option C: | Compound dies |
| Option D: | Impact dies |
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| 19. | A gang or number of simple dies and punches are ganged together to produced two or more parts at each stoke of the press is called as |
| Option A: | Progressive dies |
| Option B: | Compound dies |
| Option C: | Gang dies |
| Option D: | Transfer dies |
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| 20. | “A die which is used for removal of burrs and to flatten the edges of precision parts.  " |
| Option A: | Simple die |
| Option B: | Trimming die |
| Option C: | Shaving die |
| Option D: | Compound die |
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| 21. | The size of press is expressed in terms of |
| Option A: | Its stroke length |
| Option B: | The maximum force its ram can exert |
| Option C: | Die space |
| Option D: | Ram speed |
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| 22. | If the stroke punch is 100mm, find the radius of the crank in mm. |
| Option A: | 200 |
| Option B: | 100 |
| Option C: | 50 |
| Option D: | 400 |
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| 23. | The total opening between the ram and the bed when the ram is in its extreme down position |
| Option A: | Stroke length |
| Option B: | Die space |
| Option C: | Shut height |
| Option D: | Press adjustment |
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| 24. | In a punching press, which of the following quantity is constant? |
| Option A: | Load |
| Option B: | Torque |
| Option C: | Angular velocity |
| Option D: | Angle of rotation |
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| 25. | The distance from the top of the bed to the bottom of the slide with stroke down and adjustment up is called as…….. |
| Option A: | Shut height |
| Option B: | Top height |
| Option C: | Bottom height |
| Option D: | Height |
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| 26. | The main reason to cause accidents while working in workshop is ...... |
| Option A: | Help |
| Option B: | Precautions |
| Option C: | Carelessness |
| Option D: | Data sheet |
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| 27. | In a hydraulic press, the pump acts as a \_\_\_\_\_\_\_\_\_ |
| Option A: | Piston |
| Option B: | Motor |
| Option C: | Tubing |
| Option D: | Cylinder |
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| 28. | To protect your eyes you have to wear: |
| Option A: | Safety shoes |
| Option B: | Overall |
| Option C: | Safety Glasses |
| Option D: | Helmet |
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| 29. | Warning signs in the workshop should be obeyed |
| Option A: | Sometimes |
| Option B: | Always |
| Option C: | At the teacher’s instruction |
| Option D: | When working at the bench |
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| 30. | Which of the following is known as sheet metal worker's pencil |
| Option A: | divider |
| Option B: | Chisel |
| Option C: | scriber |
| Option D: | center punch |
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**Descriptive Questions- SAMPLE SET**

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| Q1. | Explain methods of Feeding stock in press. |
| Q2. | Differentiate between hydraulic press and mechanical press |
| Q3. | Differentiate between shaving and trimming |
| Q4. | Differentiate between coining and embossing |
| Q5. | Explain the following terms in relation to mechanical press. i)Press Tonnage ii) Throat iii)Distance between uprights |
| Q6. | Write benefits, limitations and applications of press tools. |
| Q7. | Discuss methods of feeding the strip/coil material in the press. |
| Q8. | Illustrate the methods of punch mounting. |
| Q9. | Differentiate between stopper and pilot. |
| Q10. | With your own example explain how to determine the coordinates of the centre of pressure of blanked part. |
| Q11. | What is direct pilot? What are advantages of direct pilot? Why should indirect pilot be spring loaded when used on material over 1.6mm thick? |
| Q12. | For the component shown in figure which is manufactured in progressive die,   1. Calculate economic strip layout considering size 400 mm x 1200 mm x 2 mm thick. Stock material is mild steel with 400 N/mm2 shear strength. 2. Calculate cutting load and tonnage required.   C:\Users\Mahadev\Downloads\WhatsApp Image 2020-12-26 at 12.11.24 PM(1).jpeg  All dimensions are in ‘mm’ |
| Q13. | Explain various methods of reducing maximum cutting force requirement in a cutting operation.  A 5 mm M.S. plate is cut on a shearing machine and length of cut is 550 mm. The shear strength of material is 500N/sq.mm. Find the cutting force requirement with the cutting blade inclined at 2 degrees, if the percent penetration is 40%. |
| Q14. | With the help of neat sketch explain the methods of reducing springback in bending. |
| Q15. | Find the developed length for the given bending component below. Width= 15 mm. UTS= 35 kg /mm2.  C:\Users\Mahadev\Downloads\WhatsApp Image 2020-12-26 at 12.11.24 PM(2).jpeg |
| Q16. | A cup shown in figure is to be manufactured by deep drawing operation.  Determine.  i. Developed blank size  ii. Percentage reduction and number of draws  iii. Drawing force and blank holding force (Yield strength of material: 45 kg/mm2) C:\Users\Mahadev\Downloads\WhatsApp Image 2020-12-26 at 12.11.24 PM.jpeg  All dimensions are in ‘mm’ |
| Q17. | Explain with the help of neat sketch working of Combination Die. |
| Q18. | Write short note on compound die. |
| Q19. | Explain with the help of neat sketch shaving die. |
| Q20. | Explain with the help of neat sketch embossing die. |
| Q21. | Explain with the help of neat sketch working and construction of trimming die. |
| Q22. | Explain the condition of energy overloading of press. |
| Q23. | Explain classification of presses. |
| Q24. | A press is designed to offer 90 ton of force at 200 crank angle with a stroke of 15cm.Stroke is variable from 1cm to 15cm. Calculate tonnage available when ram is 3cm above its BDC. Take stroke length equal to 10cm. |
| Q25. | A press is designed to for giving 120 ton at 30 degree crank from BDC, when stoke is 20 cm. Prepare a monograph from BDC. From monograph explain i) Overloading of torque without overloading of capacity ii) Overloading of capacity without overloading of torque. |
| Q26. | A press has a maximum DLH (day light height) of 500 mm and a ram adjustment of 60 mm. Calculate maximum and minimum shut height value for a press tooling if the bolster plat provided on the press bed has a thickness of 80 mm. The press has a variable stoke with maximum stroke and minimum stroke of150 mm and 10 mm respectively. |
| Q27. | Write safety precautions taken in the press shop. |
| Q28. | Write short note on various sensors used for hand protection and stock feeding. |
| Q29. | What is the CNC press? Explain different types of CNC controllers in detail. |
| Q30. | Explain with neat sketch construction and working of hydraulic circuit of ram movement. |
| Q31. | Discuss safety procedures and devices adopted for both press operator and equipment. |