



BRAINWARE UNIVERSITY

ODD Semester Examinations 2021- 22

Programme – Diploma in Mechanical Engineering - 2019 [Dip.ME]

Course Name – Manufacturing Processes

Course Code – DME304

(Semester III)

Time allotted : 1 Hour 15 Minutes

Full Marks : 60

(Multiple choice type question)

60 x 1 = 60

Choose the correct alternative from the following

- (I) Dross formation tendency generally higher in case of,
 A) Top gating
 B) Bottom gating
 C) Step gating
 D) None of these
- (II) Which manufacturing process includes the powder metallurgy?
 A) casting
 B) machining
 C) forming and shaping
 D) joining
- (III) Which of the following is not the type of finishing process?
 A) diffusion bonding
 B) burnishing
 C) both diffusion bonding & burnishing
 D) none of these
- (IV) Manufacturing is a process of converting raw material of
 A) Low value to high value
 B) No value change
 C) High value to low value
 D) all of these
- (V) The most commonly used flame in gas welding is,
 A) Neutral
 B) Oxidising
 C) Carburising
 D) all of these
- (VI) Thermit welding,
 A) A process which uses a mixture of iron oxide and granular aluminium
 B) Accomplished by maintaining a hot molten metal pool between plates
 C) A process in which arc is maintained under blanket of flux
 D) In no welding process
- (VII) Projection welding is,
 A) Multi-spot welding process
 B) Continuous spot welding process
 C) Used to form mesh
 D) None of these
- (VIII) The type of force applied through die in forging is
 A) Tensile force
 B) Compressive force
 C) Shear force
 D) Any of these
- (IX) Principle of _____ states that “In order to achieve the maximum accuracy in location the locating points should, therefore, be placed as far apart from one another as it is possible”.
 A) Six point location
 B) Least points
 C) Extreme positions
 D) Mutually perpendicular planes
- (X) Arc-welding uses following electric supply,
 A) A.C.
 B) D.C.
 C) Both AC and DC
 D) Spiral waveform
- (XI) Primary shape of large size components like Girth gear, large diameter shaft etc. is realized through,
 A) Forming
 B) Casting
 C) Machining
 D) Joining

- (XII) Which of the following is strongest for brazing joints
- A) Butt
B) Lap
C) Corner
D) None of these
- (XIII) Coarse grains in cast components are found generally (without any grain refinement procedure)
- A) At boundary
B) At the centre
C) At centre and boundary
D) Neither at centre nor at boundary
- (XIV) Which type of electrode is used in submerged arc welding
- A) Bare rods
B) Coated electrodes
C) Core wires
D) None of these
- (XV) Minimum temperature at which new grains are formed in metal is called,
- A) Eutectic temperature
B) Recrystallization temperature
C) Eutectoid temperature
D) Peritectic temperature
- (XVI) The following welding process uses consumable electrodes
- A) TIG
B) MIG
C) SMAW
D) PAW
- (XVII) Following tool is used to scribe arcs and circles on metallic sheets.
- A) Divider
B) Scriber
C) Steel square
D) Steel rule
- (XVIII) In arc welding, if arc is too short, it will result in,
- A) Electrode sticking to the base metal and base metal not melting and bead resting on top of the work, leading to poor fusion and gas and slag holes
B) Formation of large globules in an irregular pattern because of wandering of arc, leading of poor fusion with base metal
C) Arc extinction
D) Operator hazard
- (XIX) Following is a hole punching operation
- A) Piercing
B) Blanking
C) Nibbling
D) Circle cutting
- (XX) Expendable mold and permanent mold are the parts of _____ manufacturing process.
- A) machining
B) casting
C) none of these
D) joining
- (XXI) This type of jig is employed on multi-spindle machines
- A) Index jig
B) Universal jig
C) Open type jig
D) Multi-station jig
- (XXII) Forge welding is best suited for,
- A) Stainless steel
B) Wrought iron
C) Cast iron
D) All of these
- (XXIII) Arc length in arc welding should be equal to,
- A) Half the diameter of electrode rod
B) Rod diameter
C) 2.5 times the rod diameter
D) None of these
- (XXIV) Which of the following properties is not improved by hot forging?
- A) elastic limit
B) work hardening
C) ultimate tensile strength
D) brittleness
- (XXV) Green sand mould indicates that,
- A) Polymeric mould has been cured
B) Mould has been totally dried
C) Mould is green in colour
D) Mould contains moisture
- (XXVI) Friability and crumbling property provides the core,
- A) Ability to withstand high temperature
B) Easy breaking
C) High strength
D) Cohesiveness
- (XXVII) Following machine is used for cutting sheets in sheet metal shop
- A) Lever shearing machine
B) Universal cutting machine

C) Both Lever shearing machine and Universal cutting machine

D) Swaging machine

(XXVIII) Which of the following is the most basic structural unit of matter?

A) Atom

B) Crystal

C) Element

D) Molecule

(XXIX) The following holds the workpiece securely in a jig or fixture against the cutting forces

A) Locating device

B) Clamping device

C) Guiding device

D) Indexing device

(XXX) Die and punch are used for

A) Drawing operation

B) Bending operation

C) Edge forming

D) Joint making

(XXXI) Metal having higher specific heat generally offers,

A) Lower fluidity

B) Higher fluidity

C) Moderate fluidity

D) Can't relate to fluidity

(XXXII) Hardening during sheet metal forming of carbon steel primarily occurs due to,

A) Work hardening

B) Solid solution strengthening

C) Precipitate hardening

D) Transformation hardening

(XXXIII) A fixture does not

A) Holds the workpiece

B) Locate the workpiece

C) Guide the tool

D) All of these

(XXXIV) Poor ramming during the mould preparation causes

A) Drop

B) Air inclusion

C) Hot tears

D) All of these

(XXXV) Following is a marking tool used in sheet metal shop

A) Scriber

B) Divider

C) Trammel points

D) All of these

(XXXVI) Which of the following component gives the necessary plasticity to sand?

A) silica

B) moisture

C) clay

D) all of these

(XXXVII) In reverse polarity welding

A) Electrode holder is connected to the negative and work to positive

B) Electrode holder is connected to the positive and work to negative

C) Work is positive and holder is earthed

D) None of these

(XXXVIII) In casting, the amount of draft (in mm per metre) on exterior surfaces is about

A) 44105

B) 20-30

C) 30-40

D) None of these

(XXXIX) The process generally preferred for manufacturing of wheels and pulleys is,

A) Extrusion

B) Rolling

C) Machining

D) None of these

(XL) The amount of draft required does not depends upon

A) shape and size of casting

B) moulding method

C) material of pattern

D) None of these

(XLI) The suitable temperature range for forging steel with carbon content 0.7% is

A) 800 – 950°C

B) 1000 – 1150°C

C) 1100 – 1250°C

D) 1300 – 1450°C

(XLII) A sand casting mould assembly is shown in the given figure. The elements marked A and B are respectively,

A) Sprue and riser

B) In gate and riser

C) Drag and riser

D) Riser and runner

(XLIII) Castability is poor for

- A) High melting point material
C) Ductile material
- B) Low melting point material
D) All of these
- (XLIV) Which of the following provide cohesion among the sand particles?
A) clay and moisture
C) moisture and silica
B) clay and silica
D) none of these
- (XLV) Which of the following sheet thickness can be cut using straight shear?
A) 24 SWG
C) 18 SWG
B) 20 SWG
D) All of these
- (XLVI) Which of the following is the type of permanent joining process?
A) welding
C) both welding and soldering
B) soldering
D) none of these
- (XLVII) Component used to support the core in the mould cavity is,
A) Chills
C) Riser
B) Core
D) Chaplet
- (XLVIII) The electroslag welding is,
A) A process which uses a mixture of iron oxide and granular aluminium
C) A process in which arc is maintained under a blanket of flux
B) Accomplished by maintaining a hot molten metal pool between plates
D) There is nothing called electroslag
- (XLIX) Spiral test is conducted to measure the
A) Hardenability of the metal
C) Flowability of the sand
B) Fluidity of the molten metal
D) Viscosity of the molten metal
- (L) Submerged arc welding is,
A) A process in which arc is maintained under a blanket of flux
C) Accomplished by maintaining a hot molten metal pool between plates
B) A process which uses a mixture of iron oxide and granular aluminium
D) all of these
- (LI) Which of the following component withstand the high temperature in casting process?
A) clay
C) moisture
B) silica
D) water
- (LII) The use of jigs and fixtures
A) Facilitates deployment of less skilled labour for production
C) reduced manual handling operations
B) Eliminates pre-machining operations like marking, measuring, laying out etc.
D) All of these
- (LIII) Which of the following processes are included in finishing?
A) honing and welding
C) polishing and lapping
B) coating and milling
D) molding and plating
- (LIV) The part of gating system which regulates the rate of pouring of molten metal in the mould is,
A) Runner
C) Choke
B) Pouring basin
D) Riser
- (LV) The metals which can be machined by non-conventional method is/are,
A) Ceramics
C) Super alloys
B) Titanium alloys
D) all of these
- (LVI) Too slow welding speed in arc welding would result in,
A) Excessive piling up of weld metal, poor penetration, wasted electrodes
C) Too small bead, weak weld, and wasted electrodes
B) Excessive spatter, under cutting along edges, irregular deposits, wasted electrodes
D) Excessive pulling up of weld metal, overlapping without penetration of edges, wasted electrodes
- (LVII) Hydraulic press is used for the,
A) Small capacity
B) High capacity

C) Medium capacity

D) All of these

(LVIII) In inter gas arc welding following is used for welding aluminium

A) No-combustible electrode in combination with helium and d.c. current

B) Combustible electrodes and argon in combination with a.c. current

C) Straight polarity d.c. current

D) all of these

(LIX) Arrange the following steps in correct sequence with respect to the step of casting process I. Solidification II. Melting III. Ejection IV. Cleaning V. Pouring

A) I,III,II,V,IV

B) II,V,I,IV,III

C) II,V,I,III,IV

D) II,I,V,III,IV

(LX) Hand tools like wrenches, spanner and hammer etc. are made by the process of,

A) Forming

B) Forging

C) Machining

D) Joining