## **PROVISIONAL ANSWER KEY**

Question<br/>Paper Code:69/2024/OLCategory<br/>Code:175/2023Exam:Associate Professor/ReaderHomoeopathic PharmacyDate of Test20-06-2024DepartmentGovt Homoeopathic Medical Colleges

Question1:-Which of the following is not a source of Homoeopathic pharmacy ? 1. Dispansatorium homoeopathicum

- 2. Materia medica pura
- 3. Organon of medicine
- 4. Chronic diseases

A:-1 and 2 only

B:-3 and 4 only

C:-1 only

D:-4 only

Correct Answer:- Option-C

Question2:-The essay-Medicine of experience deals with

A:-Minimum dose

**B:-External applications** 

C:-50 millesimal scale

D:-Proving drugs on healthy human beings

Correct Answer:- Option-D

Question3:-Number of drugs described in Fragmenta de viribus medicamentorum positivis sive in sano corpora observatis

A:-12

B:-8

C:-27

D:-47

Correct Answer:- Option-C

Question4:-The person who suggested testing medicines on healthy human beings to know their pure and peculiar effects in deranging health of man, before Samuel Hahnemann.

A:-William cullen

**B:-Albrecht Von Haller** 

C:-Constantine Hering

D:-Arabian medicine

Correct Answer:- Option-B

Question5:-Which are the names given by Samuel Hahnemann for 50 Millesimal scale ?

- 1. Renewed dynamization
- 2. Spiritual scale
- 3. Infinitismal scale
- 4. New altered but perfected method

A:-1 and 2 only

- B:-3 and 4 only
- C:-1 and 4 only
- D:-2 and 3 only

Correct Answer:- Option-C

Question6:-Given below are two statements. One is labelled as Assertion A and the other is labelled as Reason R.

A. Scientific name of plants have 2 parts. One Generic and the other specific.

R. Generic names and specific names are substantive nouns.

A:-A is false and R is true

B:-A and R are true

C:-R is false and A is true

D:-A and R are true but R is not the correct explanation of A

Correct Answer:- Option-C

Question7:-As per the Botanical classification, the name of the family Umbelliferae has been changed to

A:-Poaceae

B:-Lamiaceae

C:-Asteraceae

D:-Apiaceae

Correct Answer:- Option-D

Question8:-Botanical name of Nux moschata

A:-Myrica serifera

**B:-Myristica fragrans** 

C:-Myricil palmate

D:-Strychnos nux vomica

Correct Answer:- Option-B

Question9:-The English Synonym of Aconitum napellus is

- A:-Wild hops
- B:-Leopards bane
- C:-Southern wood
- D:-Monkshood

Correct Answer:- Option-D

Question10:-The Phylum of Corallium rubrum

A:-Mollusca

**B:-Porifera** 

C:-Coelenterata

D:-Echinodermata

Correct Answer:- Option-C

Question11:-The colour of precipitate when alkaloids treated with Wagners reagent

A:-Brown

B:-White to buff

C:-Orange

D:-Blue

Correct Answer:- Option-A

Question12:-Given below are two statements. One is labelled as Assertion A and the other is labelled as Reason R.

Assertion A : Tannins are used in leather industry

Reason R : Tannin can combine with proteins of animal hide to form leather.

A:-Both A and R are wrong

B:-Both A and R are correct

C:-A correct, R wrong

D:-A wrong, R correct

Correct Answer:- Option-B

Question13:-The drug constituent that can cause stimulation of peristalsis of large intestine

A:-Alkaloid

B:-Tannin

C:-Plant exudates

D:-Anthra quinone derivative

Correct Answer:- Option-D

Question14:-The drug constituent exhibits foaming action when shaken with water to yield colloidal solutions

A:-Saponins

B:-Volatile oils

C:-Tannins

D:-Flavonoids

Correct Answer:- Option-A

Question15:-To which phytochemical Asafoetida belongs

A:-Saponins

**B:-Vitamin** 

C:-Fixed oil

D:-Plant exudate

Correct Answer:- Option-D

Question16:-The Nosode Diphtherinum is prepared according to the direction in the Group

A:-N I

B:-N II

C:-N III

D:-N IV

Correct Answer:- Option-B

Question17:-The part used in case of Castoreum

A:-The extract from the preputial follicles of beaver

B:-The extract from the preputial follicles of Male musk deer

C:-Meconium deposit from new born calf

D:-Blood of king crab

Correct Answer:- Option-A

Question18:-Ovi gallinae pellicula is preparing from

A:-Calcinated shell of oyster

**B:-Ovarian extract** 

C:-Membrane of egg shell

D:-Toasted egg shell of hen

Correct Answer:- Option-C

Question19:-Which drug is preparing from whole plant including root ?

A:-Sabal serrulata

B:-Drosera rotundifolia

C:-Allium cepa

D:-Ocimum sanctum

Correct Answer:- Option-B

Question20:-The source of Skookum chuck

A:-Lava scoriae

**B:-Organic compound** 

C:-Coal tar derivative

D:-Mineral spring

Correct Answer:- Option-D

Question21:-Match the list-I with IIList-IList- III) Solanaceaei) Alstonia scholarisII) Scrophularaceaeii) Actea racemosaIII) Ranunculaceaeiii) Euphrasia officinalisIV) Apocynaceaeiv) DulcamaraChoose the correct combination.

A:-I-i, II-ii, III-iii, IV-iv

B:-I-iii, II-iv, III-ii, IV-i

C:-I-iii, II-i, III-iv, IV-ii

D:-I-iv, II-iii, III-ii, IV-i

Correct Answer:- Option-D

Question22:-The part used in case of Aloe socotrina

A:-Whole plant

B:-Fresh leaf

C:-Latex

D:-Juice of leaf

Correct Answer:- Option-D

Question23:-Graphitis comes under

A:-Non metal

**B:-Mineral** 

C:-Metal

D:-Metalloids

Correct Answer:- Option-B

Question24:-Which of the following statement related to collection of Bark of non resinous trees is correct ?

- 1. In late autumn
- 2. From young vigorous trees
- 3. Early in spring
- 4. At about the development of leaves and blossoms

A:-1 only

B:-2 only

C:-1 and 2 only

D:-3 and 4 only

Correct Answer:- Option-A

Question25:-The instrument used for collecting venom from the dorsal gland of Bufo rana

A:-Endoscope

**B:-Induction apparatus** 

C:-Extractor

D:-Clevenger apparatus

Correct Answer:- Option-B

Question26:-In N1 and N2 Nosodes, the original stock is adjusted to

A:-20 Billion viable cells/ml

B:-10 Billion viable cells/ml

C:-5 Billion viable cells/ml

D:-15 Billion viable cells/ml

Correct Answer:- Option-A

Question27:-The time for collection of roots from annual plants

A:-Collect in the spring of second year

B:-Collect before they develop woody fibre

C:-Early in autumn as they die after ripening their seeds

D:-In spring partly in bud and partly in blossom

Correct Answer:- Option-C

Question28:-Given below are two statements. One is labelled as Assertion A and the other is labelled as Reason R.

Assertion A : Mother tincture become turbid with muddy sediment or even form crystals when exposed to great cold.

Reason R : The best temperature for mother tincture is 60°F.

A:-A is correct R is wrong

B:-Both A and R correct

C:-Both A and R wrong

D:-A is wrong R is correct

Correct Answer:- Option-B

Question29:-Which variety of ethyl alcohol is used for purification of the sugar of milk by Stapf's process ?

A:-Strong alcohol

B:-Rectified Spirit 60 O.P

C:-Absolute alcohol

D:-Dispensing alcohol

Correct Answer:- Option-C

Question30:-Lactose content in the Handmade and Compressed tablets as per HPI recommendation is

A:-Not less than 93%

B:-Not less than 94%

C:-Not less than 95%

D:-Not less than 96%

Correct Answer:- Option-B

Question31:-How much quantity of strong alcohol is to be mixed with 1000 ml of purified water to prepare dispensing alcohol as per HPI recommendation ?

A:-947 ml

B:-932 ml

C:-942 ml

D:-957 ml

Correct Answer:- Option-A

Question32:-The specific gravity of glycerine at 20°C

A:-1.455 to 1.466

B:-1.255 to 1.266

C:-1.355 to 1.366

D:-1.471 to 1.473

Correct Answer:- Option-B

Question33:-Which semisolid vehicle is prepared from purified internal fat of the abdomen of hog ?

A:-Spermaceti

B:-Lanolin

C:-Isinglass

D:-Prepared lard

Correct Answer:- Option-D

Question34:-During Hahnemannian drug proving in case of narcotic drugs the below mentioned action is noted.

A:-Chemical action

**B:-Mechanical action** 

**C:-Primary action** 

D:-Secondary action

Correct Answer:- Option-D

Question35:-In case of salts and gums for preparation of drug during Hahnemannian drug proving

A:-In the form of powder

B:-Freshly expressed juice mixed with little quantity of alcohol

C:-By pouring boiling water on it

D:-Dissolved in water just before being taken

Correct Answer:- Option-D

Question36:-The medicine must be tested on both males and females in order to ascertain the changes in the sexual sphere, this is mentioned in

A:-Aphorism 125

B:-Aphorism 126

C:-Aphorism 127

D:-Aphorism 128

Correct Answer:- Option-C

Question37:-The medicine must be tested in a perfect, simple, unadulterated form during Hahnemannian drug proving, This is mentioned in

A:-Aphorism 123

B:-Aphorism 124

C:-Aphorism 125

D:-Aphorism 131

Correct Answer:- Option-A

Question38:-Proving on sick person should not be done, this is mentioned in

A:-Aphorism 106

B:-Aphorism 107

C:-Aphorism 108

D:-Aphorism 109

Correct Answer:- Option-B

Question39:-Healthy, unprejudiced and sensitive physician is the best prover, This is mentioned in

A:-Aphorism 139

B:-Aphorism 140

C:-Aphorism 141

D:-Aphorism 142

Correct Answer:- Option-C

Question40:-Which is not permitted regarding the diet during Hahnemannian drug proving ?

A:-Carrot

B:-Young green peas

C:-Roots

D:-French beans

Correct Answer:- Option-C

Question41:-In case of indigenous plants for preparation of drug during Hahnemannian drug proving

A:-In the form of powder

B:-By pouring boiling water on it

C:-Freshly expressed juice mixed with little quantity of alcohol

D:-Dissolved in water just before being taken

Question42:-The ratio of sugar of milk added in each stage of trituration as per HPI in centesimal scale is

A:-11:33:55 B:-1:3:5 C:-3:3:3 D:-33:33:33 Correct Answer:- Option-A

Question43:-Which vehicle is used to convert 8X into 9X, after conversion of trituration into liquid potencies as per HPI ?

A:-Purified water

B:-Dispensing alcohol

C:-Dilute alcohol

D:-Rectified spirit 60 O.P

Correct Answer:- Option-C

Question44:-Dissolve 100 mg of 3rd trituration in \_\_\_\_\_ml of purified water during the preparation of 50 ml mother solution in the 50 millesimal scale preparation as per HPI.

A:-50 ml

B:-40 ml

C:-20 ml

D:-10 ml

Correct Answer:- Option-B

Question 45:-Number of succussions is applied for preparation of 0/1 potency from its mother solution.

A:-50

B:-10

C:-100

D:-20

Correct Answer:- Option-C

Question46:-How many numbers of poppy seed sized globules can hardly absorb one drop of same liquid potency in 50 millesimal scale ?

A:-10

B:-100

C:-500

D:-1000

Correct Answer:- Option-C

Question47:-The time required for "mixing" during trituration in decimal scale as

per HPI guidelines

A:-For 1 minute

B:-For 6 minutes

C:-For a moment

D:-For 4 minutes

Correct Answer:- Option-C

Question48:-Multiple vial potencies was invented by

A:-Dr. Korsakoff

B:-Dr. Samuel Hahnemann

C:-Dr. Bernhardt Fincke

D:-Dr. Jenichen of Wismer

Correct Answer:- Option-B

Question49:-One single medicated globule when placed among many non medicated globules communicates its medicinal power to the non medicated globule

A:-Dr. Korsakoff

B:-Dr. Carrol Dunham

C:-Dr. Bernhardt Fincke

D:-Dr. Jenichen of Wismer

Correct Answer:- Option-A

Question50:-A subsequent dose given to enhance the action of initial dose in human being is known as

A:-Minimum dose

B:-Booster dose

C:-Physiological dose

D:-Lethal dose

Correct Answer:- Option-B

Question51:-Perceptible and continued progress of improvement of the patient in acute and chronic disease

A:-Indication for repetition

B:-Antidote the previous medication

C:-Contraindication for repetition

D:-Repeat the same medicine in higher potency

Correct Answer:- Option-C

Question52:-In no case is it requisite to administer more than one single, simple medicinal substance at one time, This is mentioned in

A:-Aphorism 271

B:-Aphorism 272

C:-Aphorism 273

D:-Aphorism 274

Correct Answer:- Option-B

Question53:-Zealous and impulsive persons require

A:-Higher potency

B:-Medium potency

C:-Low potency

D:-Moderate potency

Correct Answer:- Option-A

Question54:-Factor responsible for repetition of dose except

A:-Condition and progress of the patient

B:-Nature of the remedy

C:-Nature of the disease

D:-When the patient is improving

Correct Answer:- Option-D

Question55:-When the total weight of the drug to be sampled is less than 100 kg and less than 1 CM of component parts of vegetable drug, the official sample size is

A:-10g

B:-250g

C:-500g

D:-1000g

Correct Answer:- Option-B

Question56:-Which constituent exhibits yellow colour in Fluorescence test during standardisation process ?

A:-Emetine

B:-Berberine

C:-Aconitine

D:-Rheum emodi

Correct Answer:- Option-B

Question57:-Number of milligram of KOH requires to neutralize the fatty acids resulting from complete hydrolysis of 1 gram of the oil or fat is known as

A:-Acid value

**B:-Saponification value** 

C:-lodine value

D:-Ester value

Correct Answer:- Option-B

Question58:-Polarimeter is used to measure the

A:-Refractive index

B:-Lamda max

C:-pH value

D:-Optical rotation

Correct Answer:- Option-D

Question59:-The ratio between the distance travelled by a given compound and a reference substance is known as

A:-Rf value

B:-Rx value

C:-Rr value

D:-Rs value

Correct Answer:- Option-C

Question60:-The following parameters are mentioned under physical evaluation of standardisation process except

A:-Ash value

B:-Melting point

C:-Congealing point

D:-Refractory index

Correct Answer:- Option-A

Question61:-Testing of drug like curare causes relaxation of muscle is includes in

A:-Organoleptic evaluation

**B:-Chemical evaluation** 

**C:-Physical evaluation** 

D:-Biological evaluation

Correct Answer:- Option-D

Question62:-The common logarithm of the reciprocal of the hydrogen ion concentration expressed in gram per litre is known as

A:-Total solid

B:-pH value

C:-Weight per milliliter

D:-Specific gravity

Correct Answer:- Option-B

Question63:-Which plant gives conical shape, if the underground plant part is cut into small pieces in organoleptic evaluation ?

A:-Podophyllum

**B:-Sarsaparilla** 

C:-Aconite

D:-Jalap

Correct Answer:- Option-C

Question64:-When the total weight of the drug to be sampled is more than 100 kg and more than 1 cm, the official sample shall be atleast ?

A:-500g

B:-250g

C:-200g

D:-100g

Correct Answer:- Option-A

Question65:-Schedule \_\_\_\_\_\_ of drug and cosmetic act lists addictive drugs (e.g. <u>narcotics</u>, <u>psychotropics</u>) having medicinal uses that must be kept under lock and key.

A:-Schedule A

B:-Schedule X

C:-Schedule J

D:-Schedule H

Correct Answer:- Option-B

Question66:-Which of the following statement/s are correct ?

A:-Nitric acid mother tinctures are prepared with purified water

B:-The higher potencies of class V are prepared with dispensing alcohol i.e. rectified spirit 60  $\ensuremath{\mathsf{O}}.\ensuremath{\mathsf{P}}$ 

C:-Only A

D:-Both A and B

Correct Answer:- Option-D

Question67:-Hahnemann's quick silver is

A:-Mercurius solubilis Hahnemanni

B:-Ammoniated nitrate of mercury

C:-Both A and B

D:-Mercurialis perinnis

Correct Answer:- Option-C

Question68:-The act bans advertisements

A:-Drug and Magic Remedies Act, 1954

**B:-Objectionable Advertisements Act** 

C:-Both the above

D:-None the above

Correct Answer:- Option-C

Question69:-National Coordination Centre (NCC) for pharmacovigilance is

A:-PGI Chandigarh

**B:-CDRI Lucknow** 

C:-Indian Pharmacopoeia Commission (IPC), Ghaziabad

D:-CMC Vellore

Correct Answer:- Option-C

Question70:-Sticta pulmonaria belongs to which class of old method of mother tincture preparation

A:-Class III

B:-Class II

C:-Class IV

D:-Class V

Correct Answer:- Option-A

Question71:-Sale of medicine in more than one place is explained in

A:-67F

B:-87E

C:-67E

D:-87F

Correct Answer:- Option-C

Question72:-Naranjio scale method of causality assessment is

A:-Algorithmic method

**B:-Probabilistic method** 

**C:-Global introspection** 

D:-Algebraic method

Correct Answer:- Option-A

Question73:-The Pharmacy Act was passed in

A:-1949

B:-1948

C:-1958

D:-1959

Correct Answer:- Option-B

Question74:-The official German Homoeopathic Pharmacopoea is

A:-Pharmacopoea Homoeopathica

B:-Homoeopathisches Pharmacopoea Arzneibuch

C:-Dispensatorium Homoeopathicum

D:-None of the above

Correct Answer:- Option-B

Question75:-Which types of adverse drug reactions are included in the definition of a "serious" adverse drug reaction according to the international accepted criteria ?

1. Adverse drug reactions leading to death

2. Life-threatening events

3. Adverse drug reactions leading to hospital admission

4. Adverse drug reactions leading to a prolonged stay in a hospital

5. Major congenital malformations

Which statement is correct ?

A:-1, 2, 3 and 5 are correct; 4 is incorrect

B:-1, 2, 3, 4 5 are correct

C:-1, 2, 5 are correct; 3 and 4 are incorrect

D:-1, 2 are correct; 3, 4 and 5 are incorrect

Correct Answer:- Option-B

Question76:-\_\_\_\_\_ is the chief source of Hydrargyrum.

A:-Ore cinnabar

**B:-Mercury oxide** 

C:-Mercuric sulphide

D:-Both A and C

Correct Answer:- Option-D

Question77:-The licensee shall maintain an inspection book in form \_\_\_\_\_\_ to enable an inspector to record his impressions and the defects noticed.

- A:-34
- B:-35
- C:-21
- D:-20

Correct Answer:- Option-B

Question78:-When the component parts of the substance are less than 1cm. in any dimension, and when total weight is less than 100 kgs ?

A:-The official sample size should be at least 250 gms

B:-The official sample will weigh about 125 gms

C:-The official sample weigh approximately 500 gms

D:-None of the above

Correct Answer:- Option-A

Question79:-All the statements are correct except

A:-The dry crude drug substance has been made the unit from which to estimate the drug strength in all tinctures and triturations

B:-Homoeopathic Pharmacopoeia of India (H.P.I.) follows the 'new method'

C:-The modern view is that plant moisture forms no part of the medicinal

substance

D:-Indian Homoeopathic Pharmacopoeia continues to follow Hahnemann's method of preparation of tinctures and potencies

Correct Answer:- Option-D

Question80:-Import of new Homoeopathic medicines are dealt in \_\_\_\_\_ part of Drug and Cosmetic Rules 1945.

A:-Part IV

**B:-Part VIA** 

C:-Part VIIA

D:-Part IXA

Correct Answer:- Option-A

Question81:-For the analysis of crude raw materials, the official sample collected by the quartering process is powdered (if previously not done), so as to pass through

A:-Number 20 standard mesh of a sieve

B:-Number 30 standard mesh of a sieve

C:-Number 40 standard mesh of a sieve

D:-Number 10 standard mesh of a sieve

Correct Answer:- Option-A

Question82:-All the statements are false except

A:-A pre-requisite in the preparation of mother tincture is communication of drug substances that are not anhydrous

B:-The temperature for percolation should be between 15-20°C

C:-Decantation is not necessary before filtration in maceration

D:-Homoeopathic Pharmacopoea of United States (H.P.U.S.) in 1941, barring a few exceptions prescribed a uniform standard of 10% drug strength for most medicinal preparations

Correct Answer:- Option-D

Question83:-When the component parts of the samples of drug substance are more than 1 cm. in any dimension, when the total weight is less than 100 kgs ?

A:-Atleast 500 gms shall be taken as an official sample

B:-The official sample size should be at least 250 gms

C:-The official sample size should be at least 125 gms

D:-None the above

Correct Answer:- Option-A

Question84:-Pearl ash is prepared from

A:-Cream of tartar

B:-Potassium hydrogen tartarate

C:-Impure carbonate of lime

D:-Both A and B

Correct Answer:- Option-D

Question85:-A drug is manufactured under a name which belongs to another drug is

A:-Misbranded drug

B:-Adulterated drug

C:-Spurious drug

D:-All the above

Correct Answer:- Option-C

Question86:-American Homoeopathic Pharmacopoeia (A.H.P.) was published by

A:-Otis Clap and Son

B:-American Institute of Homoeopathy

C:-Boericke and Tafel

D:-Lawrence T Ashwell

Correct Answer:- Option-C

Question87:-Toluene distillation method is used for

A:-Azeotropic distillation

**B:-Ethanol preparation** 

C:-Both A and B

D:-Moisture content estimation

Correct Answer:- Option-D

Question88:-\_\_\_\_\_ is a weak solution of potassium hydrate.

A:-Kali bichromicum

B:-Borax

C:-Causticum

D:-Kali carb

Correct Answer:- Option-C

Question89:-Augmented pharmacological effects-dose dependent and predictable type of ADR comes under which classification of ADR ?

A:-Type A

B:-Type B

C:-Type C

D:-Type D

Correct Answer:- Option-A

Question90:-Karl Fischer Titration is particularly applicable for drugs containing

A:-Small quantities of moisture

B:-Very small quantities of moisture

C:-Large quantities of moisture

D:-None of the above

Correct Answer:- Option-A

Question91:-Criteria of a sample include

A:-Representativeness

**B:-Independence** 

C:-Homogeneity

D:-All the above

Correct Answer:- Option-D

Question92:-The instrument used by Hahnemann to prepare Heparsulph is

A:-Crucible

**B:-Glass retort** 

C:-Glass mortar

D:-None of the above

Correct Answer:- Option-A

Question93:-Which of the statement is incorrect ?

A:-Reporting of ADR is done through ADR reporting form.

B:-Central Drugs Standard Control Organisation is the National Regulatory Authority of India

C:-LD 50 figures are frequently used as a general indicator of a substances chronic toxicity.

D:-ED 95 is the dose required for desired effect in 95% of the population exposed to it.

Correct Answer:- Option-C

Question94:-Which one of the following is not a function of Homoeopathic Pharmacopoea committee

A:-To prepare a pharmaceutical codex

B:-To lay down the tests for purity, identity and quality

C:-To lay down principles and standards for the preparation of Homoeopathic drugs

D:-To prepare standards on Sarcodes

Correct Answer:- Option-D

Question95:-Which one of the following statement is incorrect ?

A:-All European Union Member States are obliged to register Homoeopathic medicines pursuant to Directive 2001/82/EC(Veterinary use).

B:-Encyclopedia of Homoeopathic Pharmacopoea contain1860 monographs of Homoeopathic drugs over 3 volumes

C:-Encyclopedia of Homoeopathic Pharmacopoea introduced many new drugs on gemmotherapy and lithotheraphy.

D:-FHP give valuable information on Nosods and Sarcodes

Correct Answer:- Option-C

Question96:-The mother solution of Thymolum is prepared by

A:-Dispensing alcohol

**B:-Strong alcohol** 

C:-Purified water

D:-Glycerine

Correct Answer:- Option-A

Question97:-Which of the following statement/s are correct ?

A:-When the total weight of the drug substance is very less (that is less than 10kgs.), the official sample will weigh about 125 gms.

B:-When the component parts of the samples of drug substance are more than 1 cm. in any dimension. Collect the sample by hand.

C:-Both are correct

D:-None are correct

Correct Answer:- Option-C

Question98:-Standards of ophthalmic preparations are given in

A:-Schedule A

B:-ScheduleFF

C:-ScheduleM1

D:-ScheduleH

Correct Answer:- Option-B

Question99:-No Homoeopathic medicine shall be imported unless it is packed and labelled in conformity with Rules in Part \_\_\_\_\_ of Drug and Cosmetic Rule 1945.

A:-IXA

B:-VI

C:-VIIA

D:-IVA

Correct Answer:- Option-A

Question100:-The drug strength of Buforana Q is

A:-1/100

B:-1/1000

C:-1/2

D:-1/20

Correct Answer:- Option-B