

SHIVAJI MAHAVIDYALAYA,GADCHIROLI

SESSION-2021-2022

SUBJECT- MICROBIOLOGY

CLASS-B.Sc 1st Year

SEM- 1st

Date-

Marks-30

- 1 HEPA filter are widely used in
A)autoclave B)laminar air flow C)face mask D)oxygen masks
- 2 The degree of hotness and coldness of air is called...
A)atmosphere B)Moisture C)temperature D)thermosphere
- 3 Air pressure is defined as...
A)the pressure exerted by the weight of air on the earth's surface B)the amount of insolation decreases from the equator towards the pole. C)the movement of air from high pressure areas to low pressure areas D)Insolation is the incoming solar energy intercepted by earth
- 4 ___ in the air at any time is known as humidity.
A)Moisture B) heat C) air D) particles
- 5 The gaseous mantle consisting of various gases around the earth surface is called___.
A) Lithosphere B) Atmosphere or Air C) Rhizosphere D) Hydrosphere
- 6 The lowest part of the atmosphere is known as ___.
A) Thermosphere B) Ionosphere C) Troposphere D)Exosphere
- 7 Which of the following article can be sterilized in an autoclave
A) gloves B) dressing material C) culture media D) all of the above
- 8 4) The organisms found in air are called _____.
A)Aeronula B) Droplets C) Actinomycetes D)Airborne organisms
- 9 The troposphere, stratosphere and mesosphere are collectively known as _____.
A) Homosphere B) Ionosphere C) Exosphere D) mesopause
- 10 Temperature is measured by _
A) Celsius B) Fahrenheit C) Kelvin D)all of the above

- 11 Determination of types and numbers of microorganisms in a particular air is called ____.
- A) Microbial analytics B) Qualitative analytics C) Droplet analytics D) Quantitative analytics
- 12 Diarrhoea is not caused by
- A) *Shigella dysenteriae* B) *Streptococcus pyogenes* C) *Clostridium difficile* D) *Salmonella enteritidis*
- 13 B cells are activated by.....
- A) complement B) antigen C) antibody D) interferon
- 14 The genetic material in HIV is
- A) dsDNA B) ss DNA C) s RNA D) none of these
- 15 Which of the following is/ are air borne disease
- A) Diphtheria B) Tuberculosis C) AIDS D) A&B
- 16 The boundary between troposphere and stratosphere is known as
- A) mesopause B) stratopause C) ionopause D) tropopause
- 17 The term biosphere refers to
- A) rocks and minerals B) plants and animals C) water sources D) atmosphere and lithosphere
- 18 Secondary sewage treatment is mainly a ____ .
- A) physical process B) Mechanical process C) Chemical process D) Biological process
- 19 The equipment to measure atmospheric humidity is
- A) anemometer B) Hygrometer C) psychrometer D) lysimeter
- 20 The gap between cell wall and cell membrane is called...?
- A) periplasmic space B) intercellular space C) cristae D) matrix
- 21 The micro-organisms Grow at high salinity are -
- A) Oenophiles B) Halophiles C) autotrophs D) none of these
- 22 viruses can be Cultivated in-
- A) Lab media B) Living cell C) both a and b D) none of these.
- 23 Many ribosomes combine together to form a chain known as..?

- 24 A) multiribosome B) periplasm C) nucleoid D) polyribosome
What is the full form of BOD ?
- 25 A) Biochemical oxygen demand B) Bionated oxygen demand C) Biological oxygen disease D) Biological oxygen deficiency
Secondary sewage treatment is mainly a ____ .
- 26 A) physical process B) Mechanical process C) Biological process D) Chemical process
Chlorination of water is done for the removal of ____ .
- 27 A) Suspended solids B) Sediments C) Hardness D) Bacteria
Sterilization is ____
- 28 A) Process for preparation of antibiotics B) killing or removing of all the microorganisms from an article C) process of growing microbes in laboratory D) fragmentation of big particles into smaller one for the preparation of tablets
HEPA filter is _____
- 29 A) Hot efficiency particulate air B) High efficiency particulate air C) Hold efficiency particulate air D) Heavy efficiency particulate air
Enzymes are chemically
- 30 A) lipid B) proteins C) carbohydrates D) none of these
Select water borne disease out of the following.
- A) Malaria B) Dengue C) Tuberculosis D) Cholera

SHIVAJI MAHAVIDYALAYA, GADCHIROLI

SESSION-2021-22

SUBJECT-MICROBIOLOGY

CLASS-B.Sc 3rd year

SEM-V

Date-

Max Marks-30

Practical

25 marks

- 1 EMB agar is used for differentiation of *Enterobacter aerogen* and
a) *E. coli* b) *S. aureus* c) *Bacillus subtilis* d) *Pseudomonas sp.*
- 2 In Mac Conkey Agar crystal violet and..... inhibit the growth of Gram positive species.
a)NaCl b)Peptone c)Sodium Sulphate d)Bile salts
- 3 Media is used for the examination of potable water, dairy products and food.
a)Nutrient agar b) EMB agar c) ENDO agar d) PDA agar
- 4 T.S.I in biochemical examination of microorganism stands for..... Agar.
a) Turbocharged stratified injection b) Triple sugar Iron c) Total Solar Irradiance d) Thyroid Stimulating Immunoglobulins.
- 5 *E. coli* is classified under Family.
a)Enterobacteriaceae b)Acidobacteriaceae c)Aquificae d)verrucomicrobia
- 6 Strain grow red to pink on Mac Conkey Agar.
a)Endotoxin producing b) lactose fermenting c) exotoxin producing d) lactose non fermenting.
- 7 In chromatography 'Rf' stands for
a)Radio frequency b)Retention factor c)remote frequency d) representative factor
- 8 *Staphylococci* is Gram positiveShape organism.
a)Rod b) cocci c)vibrio d)spiral
- 9 MSA is recommended for the detection and enumeration of.....positive staphylococci in milk, food.
a)Lecithinase b)amylase c)glucose d)coagulase
- 10 What is MIC in antibiotic susceptibility testing?
a)message integrity code b) market intelligence center c)minimum inhibitory concentration d)maximum inhibitory concentration.
- 11 Mac Conkey agar is earliest differential medium for the cultivation of
a)Urinary track pathogens b) Enteric microorganisms c) oral pathogens d) epidermal microorganisms
- 12is added as pH indicator in MSA media.

- a)phenol red b)Methylene blue c)Ink d)Saffranine
- 13 *Staphylococcus aureus* show coloured colonies on MSA
a)yellow b)red c)pink d)blue
- 14 *Proteus* converts phenyl alanine to
a)phenyl acetic acid b)phenyl citric acid c)phenyl pyruvic acid d)phenol
- 15 Media is recommended for growth of urease producing *proteus species*.
a) EMB agar b) MSA agar c) UTI agar d) Urea agar base
- 16is primary source of carbon in bismuth sulphate agar.
a)Fructose b) glucose c)NaCl d)Mannitol
- 17 Phenyl alanine agar was developed by
a)Robert Koch b)R.J. Petri c) Ewing d)R.S. Sharma
- 18 On Mac Conkey agar *Proteus sp.* showcoloured colonies.
a)green b)blue c)yellow d)red
- 19 Filter paper is used in chromatography experiment.
a)tissue b)Whatman's c) news paper d) 70 GSM paper
- 20 Chromatography is used for.....of closely related compounds.
a)Fusion b)analysis c)separation d)mixing
- 21 Dengue is caused due to.....virus.
a)HIV b) Flavi c)Tobacco mosaaic d) corona
- 22 For cholesterol test..... device is used.
a)spectrophotometer b)Autoclave c)mobile d)thermometer
- 23 *Proteus bacilli* after incubation period of 24 hrs. changes colour of Urea base agar to
a)light pink b)light green c) dark pink d) dark red
- 24 Indicator present in Bismuth sulphite Agar is
a)methyl orange b)phenol red c) brilliant green d) methyl red
- 25is Dengue Antigen
a)NS1 b)NS2 c)NS3 d)NS4

Answer in one sentence

5 marks

1. What is full form of SGPT
2. Define chromatography.
3. What is vaccine?
4. Define infection.
5. Enlist any two types of centrifuge.

SHIVAJI MAHAVIDYALAYA,GADCHIROLI

SESSION-2021-22

SUBJECT-MICROBIOLOGY

CLASS-BSc 2nd year

SEM- III

Date-

Max marks – 30

- 1 Media is used to study enzyme activity of lipase.
a) Tween 80 hydrolysis media b) Mueller Hinton agar c) Starch Agar d) Potato Dextrose Agar
- 2 Scientistin 1888 first isolated bacterium from root nodules of leguminous plant.
a) Pasture b) Beijerinck c) Waksman d) Koch
- 3 *Rhizobium species* grow well onmedium and produce whitish colonies.
a) MacConkey agar b) EMB agar c) UTI agar d) YEM agar
- 4 Catalase test is performed by adding on nutrient agar culture slant.
a) H₂O b) H₂O₂ c) HCl d) NaOH
- 5 In urease enzyme activity test of organism the colour of media changes from yellow toin positive test.
a) White b) red c) pink d)
- 6 Enzyme breaks down starch into sugar.
a) lipase b) amylase c) ligase d) catalase
- 7 *Rhizobium* is inrelationship with the roots of plants.
a) Synergistic b) Symbiotic c) Commensalism d) parasitism
- 8 Urease enzyme decompose Urea to
a) Ammonia b) Uric Acid c) Water and gas d) HCl
- 9 Colour after addition of iodine solution indicates presence of starch.
a) Blue b) purple c) Pink d) Red
- 10 End product of EMP pathway is
a) Glucose b) Pyruvate c) Fructose 6 phosphate d) fructose
- 11 Amylase production test of organism is studied on the medium
a) Nutrient agar b) Mueller Hinton agar c) Starch agar d) EMB agar
- 12is the area of soil immediately surrounding the root of plant
a) *Rhizopus* b) stem c) Lipase d) root
- 13 In Microbiology, PDA stands for
a) Potato dextrose agar b) patent ductus arteriosus c) personal digital assistant d) protein primary amines

- 14 In bacterial growth curve is the phase of constant high population of cells, that is maintained by a balance between cell division and cell division and cell death.
- a)Log phase b) maximum stationary phase c) lag phase d) death phase
- 15 Jensen's media is recommended for the cultivation of.....fixing bacteria.
- a)Phosphorus b)Nitrogen c)oxygen d)carbon
- 16are the formulations of living microorganisms used to increase soil fertility.
- a)Bio pesticide b)bio insecticide c)bio fertilizer d) chemical fertilizer
- 17 Lipase is..... enzyme.
- a)Extracellular b)Intracellular c)Iso-enzyme d)Ligase
- 18 Bacteria are incubated at.....for 24 hours.
- a)30 °C b) 20°C c)28 °C d) 37°C
- 19 Root nodules are immersed in 1% acidified..... For 5 minutes to remove contaminants.
- a)HCl b) NaCl c) HgCl₂ d)H₂O
- 20 The zone of opacity produced by lipase positive organisms is composed of crystals of
- a)Magnesium salts b)copper salts c)sodium salts d)calcium salts
- 21is the Gram positive organism.
- a)*E. coli* b) *Rhizobium sp.* c)*S. aureus* d)*Pseudomonas sp.*
- 22is known as father of modern enzymology.
- a)Berzelius b)Sumner c)Koch d)Pasteur
- 23 In holoenzyme protein part is called as
- a)coenzyme b)apoenzyme c)cofactor d)isoenzyme
- 24 In Jensen's media increases the fixation of N₂
- a)carbohydrate b)sodium chloride c)sodium molybdate d)Calcium
- 25is the component of photoelectric colorimeter.
- a)Resistor b)Diode c) cotton plug d)galvanometer.

Answer in one sentence

5 marks

- 1) Enlist the phases of bacterial growth curve.
- 2) What is fermentation? And mention 2 types of fermentation.
- 3) Name the factors affecting enzyme activity.
- 4) What is Nitrogen fixation?
- 5) Define synergism

Gondwana University, Gadchiroli

Practical Exam B.A. I Year Sem. I

2021-22

College Name :- Shivaji Mahavidyalaya, Gadchiroli

Name Of Student :- _____

Class :- B.A. I Sem.

Subject :- Geography

Mobile No :- _____

Date of Exam :- / /2021

मार्क 30

प्रश्न १ ला योग्य पर्यायी शब्द निवडून वाक्य पूर्ण करा.

१. पृथ्वीची प्रतिकृती ----- आहे.

अ) अक्षवृत्ते ब) रेखावृत्ते क) पृथ्वीगोल

२. ----- नकाशामध्ये मानवाने निर्माण केलेल्या विविध घटकाची माहिती दर्शविली जाते.

अ) ऐतिहसीक ब) सांस्कृतिक क) आर्थिक

३. ग्रीक काळात ----- या शास्त्राज्ञाने संपूर्ण पृथ्वीचा परिघ मोजून काढला.

अ) टॉलेमी ब) कार्ल रिटर क) इरॉटोस्थेनेस

४. १ इंच = १ मैल हे ----- चे उदाहरण आहे.

अ) अंकप्रमाण ब) शब्दप्रमाण क) रेषाप्रमाण

५. ----- हे अंकप्रमाणाचे उदाहरण आहे.

अ) RF १ : १००००० ब) १२ इंच = १ फुट क) यापैकी नाही

६. अंकाची रचना करण्याच्या पध्दतीला ----- असे म्हणतात.

अ) सारणीय ब) पदमुल्य क) पदमाला

७. प्राप्त अंक पदमुल्यांनुसार लिहीण्यात येते तेव्हा अशा रचनेला ----- पदमाला म्हणतात.

अ) साधी ब) खंडीत क) अखंडीत

८. प्राप्तांक श्रेणीचा मध्य बिंदु म्हणजे ----- होय

अ) मध्यमान ब) मध्यका क) बहुलग

९. पदमालेत जे पदमुल्य पुन्हा पुन्हा येतात त्याला ----- असे म्हणतात.

अ) मध्यमान ब) मध्यका क) बहुलग

१०. M या इंग्रजी अक्षराने ----- ओळखले जातात.

अ) मध्यमान ब) मध्यका क) बहुलग

प्रश्न २ तोंडी परिक्षावर आधारीत प्रश्नाचे योग्य पर्याय निवडा.

१. ६३,३६० इंच = -----

अ) १ यार्ड ब) १ मैल क) १ फुट

२. ----- = $\frac{EX}{N}$

अ) m ब) mdn क) mode

३. पृथ्वीगोल म्हणजे पृथ्वीची ----- प्रक्रिया होय.

अ) आकृती बध्द ब) प्रतिकृतीबध्द क) प्रमाणबध्द

प्रश्न ३ प्रात्येक्षक वही

Gondwana University Gadchiroli

Practical Exam online B.A. I Year Sem. I

Page No.

Date

Year Sem. I

Institution name:- Shivaji Maharaj Pratapalaya Gadchiroli

Name of Student :- Suvarna Ashok Chaudhari

Class :- B.A. I Sem

20+06 = 26

Subject :- Geography

Mobile no :- Suvarna Ashok Chaudhari

Date of Exam :- 7/01 2022 winter

Form
07/01/2022

प्रश्न 1 ला योग्य पर्यायी शब्द निवडून द्या
क्या

1) पृथ्वीची प्रतिकृती पृथ्वीगोल आहे

2) आर्थिक नकारात्मकतेतून मानवाने निर्माण केलेल्या किंवा दुरुस्थितीतून जाणारी हानी हानी आहे

3) ग्रीक भाषेतून (ग्रीक) या शास्त्राज्ञानात संपूर्ण पृथ्वीचा परिघ मांडून आला.

4) 1 इंच = 1 मैल हे वाल्डप्रमाणचे उदाहरण आहे.

5) 100000 हे अंकप्रमाणाचे उदाहरण आहे.

6) अंकाची रचना केल्याच्या पध्दतीला सारणीय असे म्हणतात.

Teacher's Signature

7) प्रांत अंक पदमुल्यांनुसार लिहील्यात येते
 १) लक्षा अशा स्थाना खाली पदमात्रा
 ठेवतात.

8) प्रांतांक शून्याची मध्य बिंदू ठेवजे मध्यका
 होय.

9) पदमात्रेत जे पदमुल्ये पुढे पुढे येतात
 त्यांना मध्यमत्रां असे ठेवतात.

10) म या इंग्रजी अक्षराने मध्यका आळखणे
 जालात.

प्रश्न

1) $63,360 \text{ रु} = 1 \text{ मील}$

2) $m = \frac{\sum X}{N}$

3) पुष्टीगोल ठेवजे पुष्टीची प्रमाणबद्ध प्रक्रिया होय.

Gondwana University, Gadchiroli
Practical Exam B.A. II Year Sem. III
2021-22

College Name :- Shivaji Mahavidyalaya, Gadchiroli

Name Of Student :- _____

Class :- B.A. III Sem.

Subject :- Geography

Mobile No :- _____

Date of Exam :- / /2022

प्रश्न १ ला योग्य पर्यायी शब्द निवडून वाक्य पूर्ण करा.

२० मार्क

१. एखाद्या भूप्रदेशातील वेगवेगळ्या ठिकाणच्या उंचीतील फरकास ----- म्हणतात.
अ) नकाशा ब) उतार क) बेंच मार्क
२. नकाशात दर्शविलेल्या समोच्छा रेषा जेव्हा दुर-दुर अंतरावर असतो तेव्हा तिथे ----- दिसते.
अ) तिब्र उतार ब) विषम उतार क) मंद उतार
३. हिमनदीच्या घर्षण कार्यामुळे ----- तयार होतो.
अ) सर्क ब) लोंबती दरी क) कडा
४. नकाशावर सारख्या उंचीच्या स्थळांना जोडणाऱ्या रेषांना ----- म्हणतात.
अ) ग्रिया ब) समोच्यात्ता रेषा क) खिंड
५. भारतीय स्थलनिर्देशक नकाशे ----- विभागातर्फे प्रकाशित होतात.
अ) भारतीय सर्वेक्षण ब) आंतरराष्ट्रीय सर्वेक्षण क) यापैकी नाही
६. भारतात स्थलनिर्देशक सर्वेक्षण विभागाचे मुख्य कार्यालय ----- येथे आहे.
अ) चेन्नई ब) मुंबई क) देहरादून
७. १ इंचास ४ मैल या प्रमाणावरील नकाशांना ----- म्हणतात.
अ) अर्धा इंची नकाशा ब) एक इंची नकाशा क) चतुर्थांशशीट
८. नकाशात देशाची राजधानी ओळखण्यासाठी ----- या सांख्येतील चिन्हाचा वापर करतात.
अ) ☉ ब) ● क) ○
९. लहान क्षेत्रफळाचा नकाशा तयार करण्यासाठी ----- पध्दतीचा उपयोग होतो.
अ) विकीरण ब) छेदन क) वेढा
१०. प्लेन टेबल सर्वेक्षणात उत्तर दिशा दर्शविण्यासाठी ----- हे उपकरण वापरतात.
अ) दशरिषा ब) स्पिरीट लेव्हल क) चुंबकीय सुई

प्रश्न २ तोंडी परिक्षेवर आधारीत प्रश्नांचे योग्य पर्याय निवडा.

०३ मार्क

१. समोच्च रेषा एकमेकांना स्पर्श करतात त्या भुरुपाला ----- म्हणतात.
अ) खिंड ब) पठार क) कडा
२. पाव इंची नकाशावरील समोच्च रेषांतर ----- असते.
अ) २५० फुट ब) २५० इंच क) २५० मैल
३. प्लेने टेबल सर्वेक्षणामध्ये समपातळीसाठी ----- या उपकरणाचा वापर करतात.
अ) स्पिरीट लेव्हल ब) तिपाई क) फलक

प्रश्न ३ प्रात्यक्षिक वही

०२ मार्क

Wondwan University, Gadchiroli

Practical Exam online B.A.

| | |
|---------|------|
| Page No | Year |
| Date | |

Sem III

colleye Name :- shivaji Mahavidyalaya,
Gadchiroli

Name of student : Mohini bramhamwade

class : B.A. II Year sem III

Subject : Geography

mobile no :-

Date of Exam :- 07/01/2022 winter

प्रश्न 1. योग्य पर्यायी शब्द निवडून वाक्य पूर्ण करा.

1) मुखादूया भूप्रदेशातील वेगवेगळ्या ठिकाणांच्या उंचीतील फरकास बेचें भाकें म्हणतात.

2) नकाशात दर्शविलेल्या समोच्छा रेषा जेव्हा दूर-दूर अंतरावर असतो तेव्हा तिथे निव्व उतार दिसते.

3) हिमनदीच्या वर्षाण कायामुळे लोखनी दरी तयार होते.

Teacher's Signature

४] नकाशावर स्वरूपा उंचीचा स्थळांना जोडणाऱ्या रेषांना समोच्च रेखा म्हणतात.

५] भारतीय स्थलनिर्देशक नकाशे भारतीय सर्वेक्षण विभागातर्फे प्रकाशित होतात.

६] भारतात स्थलनिर्देशक सर्वेक्षण विभागाने मुख्य कार्यालय देहरादून येथे आहे.

७] इंचास ६ मीटर या प्रमाणावरील नकाशांना चतुर्थांशरीट म्हणतात.

८] नकाशात देशाची राजधानी ओळखण्यासाठी व या सांकेतिक चिन्हांचा वापर करतात.

९] लहान क्षेत्रफळाचा नकाशा तयार करण्यासाठी वेढा हे उपकरण वापरतात. पट्टाचीचा उपयोग होतो.

१०] प्लेन टेबल सर्वेक्षणाने उत्तर दिशा दर्शविण्यासाठी चुंबकीय सुई हे उपकरण वापरतात.

2. तोंडी परिवेवर माहारात प्रवनांचे योग्य पध्दधि
निवडा.

1. सभोच्य रेखा तुकमेकांना स्पर्श करणात त्या
भुरुपाला कडा म्हणतात.

3. पाव इंची मकाशावरील सभोच्छ रेखांतर
250 मेल असते.

3. प्लेने टेबल सल्लेदोणाभध्ये सभपातळीसाठी
क्वीरीठ लेव्हल या उपकरणाचा वापर करतात.

Gondwana University, Gadchiroli
Practical Exam B.A. III Year Sem. V
2021-22

College Name :- Shivaji Mahavidyalaya, Gadchiroli

Name Of Student :- _____

Class :- B.A. V Sem.

Subject :- Geography

Mobile No :- _____

Date of Exam :- / /2022

२० मार्क

प्रश्न १ ला योग्य पर्यायी शब्द निवडून वाक्य पूर्ण करा.

१. नकाशाचे ----- प्रमाण बदलवून नकाशाचे लघुकरण व विशालीकरण करतात.
अ) चौरस ब) प्रमाण क) छेद
२. खालील पैकी नकाशावरील चौरसाची बाजू ठरविणारे सूत्र कोणते.
अ) नविन चौरसाची बाजू = $\frac{\text{मुळचौरसाची बाजू}}{\text{मुळ नकाशा प्रमाणछेद}} \times \text{मुळ नकाशा प्रमाणछेद}$
नविन नकाशा प्रमाणछेद .
ब) नविन चौरसाची बाजू = $\frac{\text{मुळ नकाशा प्रमाण छेद}}{\text{मुळ चौरसाची बाजू}} \times \text{मुळ नकाशा प्रमाणछेद}$
नविन नकाशा प्रमाणछेद
क) नविन चौरसाची बाजू = $\frac{\text{नविन नकाशा प्रमाण छेद}}{\text{मुळ चौरसाची बाजू}} \times \text{मुळ नकाशा प्रमाणछेद}$
३. ----- म्हणजे जमिनिवरील अंतरे मोजण्याची कला होय
अ) तालेबंध ब) दिशांश क) सर्वेक्षण
४. लोलकीय होकायंत्र या उपकरणाने प्रथम ----- दिशा ठरविता येते.
अ) उत्तर ब) दक्षिण क) पूर्व
५. कॅप्टन कॅटल यांना ----- मध्ये लोलकी होकायंत्राची रचना केली.
अ) १९१२ ब) १९१३ क) १९१४
६. एकाच प्रकारचा बदल दर्शविणाऱ्या आकृतीस ----- आकृत्या म्हणतात.
अ) एकमितीय ब) द्विमितीय क) त्रिमितीय
७. एकाच प्रमाणावर एकपेक्षा अधिक घटक दर्शविणे याला ----- म्हणतात.
अ) साधारेषालय ब) संयुक्त रेषालय क) बहुरेषालय
८. भौगोलीक उपघटकांची आकडेवारी अंशात्मक पध्दतीने दर्शविली जाते तेव्हा त्या आकृतीस ----- म्हणतात.
अ) विभाजीत आयात ब) विभाजीत वर्तळ क) यापैकी नाही
९. भौगोलीक घटकाचे उपघटक एकास कामदावर प्रत्येक स्तंभात वेगवेगळे दर्शविल्यामुळे तयार होणाऱ्या आकृतीस ----- स्तंभालेख म्हणतात.
अ) साधा ब) संयुक्त क) जोड
१०. पायारेषेवर एकावर एक स्तंभ काढून तयार होणाऱ्या आकृतीस ----- लोकसंख्या मतीस म्हणतात.
अ) साधा ब) संयुक्त क) अध्यारोपीत

Gondwana University Gadchiroli

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Practical Exam Online

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College Name :- Shivaji Mahavidyalaya
Gadchiroli

Name of Student :- Shrutika Waman
Tantakwar

Class :- B.A.V Sem

Subject :- Geography

Date :- 07/01/2021

प्रश्न 1. योग्य चर्चा शब्द निवडून वाक्य
पुर्ण करा.

1. नकाशाचे चौरेस प्रमाण बदलवून
नकाशाचे लघुकरण व विशालीकरण करतात.

2. खालील पैकी नकाशावरील चौरेसाची
बाजू द्वारे सुत्र कोणते
नविन चौरेस बाजू = $\frac{\text{मूळ चौरेसाची बाजू}}{\text{नविन नकाशा प्रमाणखंड}}$ $\times \frac{\text{मूळ नकाशा प्रमाणखंड}}$

3. सर्वेक्षण म्हणजे जमिनीवरील अंतर
मोजव्याची कला होय.

Teacher's Signature

4. लोचकीय होकायंत्र या उपकरणाने प्रथम उत्तर दिशा दर्शित्वा येते.
5. कॅप्टन केटल यांना 1913 मध्ये लोलकी होकायंत्राची रचना केली.
6. एकाच प्रकारचा बंदन दर्शविणाऱ्या आकृतीस द्विमतीय आकृत्या म्हणतात.
7. एकाच प्रमाणावर एकपेक्षा अधिक घटक दर्शविणे याला बहुरसालेख म्हणतात.
8. भौगोलिक घटकांची आकुडेवारी अंशात्मक पद्धतीने दर्शविली जाते तेव्हा त्या आकृतीस विभाजित वस्तु म्हणतात.
9. भौगोलिक घटकांचे उपघटक एकाच कागदावर प्रत्येक स्तंभात वेगवेगळे दर्शविण्यामुळे तयार होणाऱ्या आकृतीस संयुक्त स्तंभालेख म्हणतात.
10. पायरेथेटर एकावर एक स्तंभ काढून तयार होणाऱ्या आकृतीस संयुक्त लोकसंख्या मणारे म्हणतात.

Gondwana University, Gadchiroli.

Practical exam sem-I (Winter-2020)

Shivaji Mahavidyalaya, Gadchiroli.

Subject: Physics

Time: 6 hrs

Marks: 30

Date: / / 2021

Name of Student:

- Hooke's law essentially defines_____
[a] Stress [b] Strain [c] Yield Point [d] Elastic limit
- The dimensional formula of stress is_____
[a] $[M^0 L^1 T^2]$ [b] $[M^0 L^{-1} T^{-2}]$ [c] $[M^1 L^{-1} T^{-2}]$ [d] $[M^0 L^1 T^1]$
- The nearest approach to the perfectly elastic body is _____.
[a] Quartz fibre [b] Putty [c] Silver [d] Platinum
- The restoring force per unit area is called _____.
[a] Stress [b] Strain [c] Elasticity [d] Plasticity
- The restoring force per unit area perpendicular to the surface is called _____ stress.
[a] Longitudinal [b] Tangential [c] Normal [d] Tensile
- Compressibility of a material is reciprocal of _____.
[a] Modulus of rigidity [b] Young Modulus [c] Bulk Modulus [d] None
- The work done per unit volume in stretching the wire is equal to_____.
[a] Stress *Strain [b] $(1/2)$ Stress *Strain [c] Stress /Strain [d] Strain/Stress

8. Units of modulus of elasticity is _____
[a] dyne/cm [b] dyne/cm² [c] N/m [d] dyne
9. The ratio of longitudinal stress to linear strain is called _____.
[a] Young modulus [b] Bulk modulus [c] Modulus of rigidity [d] None
10. The time period of a torsional pendulum is directly proportional to the square root of _____.
[a] Distance [b] Vibration [c] Moment of inertia [d] Force
11. The period of simple pendulum its time period will _____.
[a] Increase [b] Decrease [c] remains same [d] infinite
12. The time period of simple pendulum having infinite length is _____.
[a] Zero [b] One [c] infinite [d] half
13. The compound pendulum is also known as _____.
[a] Simple [b] Physical [c] Katers [d] Torsional
14. The katers pendulum is also known as _____ pendulum.
[a] reversible [b] conical [c] simple [d] torsional
15. The time period of compound pendulum do not depends on _____ of the body.
a) size [b] shape [c] length [d] mass
16. The bar pendulum is also known as _____ Pendulum.
[a] simple [b] compound [c] katers [d] torsional
17. If we increase the length of simple pendulum its time period will _____.
[a] increase [b] decrease [c] remain same [d] infinite
18. Youngs modulus is the property of _____.
[a] Gas [b] both solid and liquid [c] liquid [d] solid

19. Energy is store in a flywheel in the form of _____
[a] heat energy [b] solar energy [c] kinetic energy [d] potential energy
20. The moment of inertia of a solid circular disk is given by _____
[a] $mR^2/2$ [b] $mR^2/3$ [c] $2mR^2/3$ [d] $mR^2/4$
21. Torsional pendulum is used to determine mass moment of inertia of _____
[a] flywheel [b] rigid bar [c] both a. and b [d] none of the above
22. Which of the following shape of the body can be considered as compound pendulum?
[a] Cylindrical [b] Cubical [c] Cuboidal [d] Any rigid body
23. In order to double the period of a simple pendulum, the length of the string should be
[a] halved [b] doubled [c] quadrupled [d] none of the mentioned
24. The periodic time of a compound pendulum will be _____ when the axis of rotation passing through the CG.
[a] Remain same [b] Minimum [c] None of the these [d] Maximum
25. Modulus of rigidity is defined as the ratio of _____
[a] longitudinal stress and longitudinal strain
[b] volumetric stress and volumetric strain
[c] lateral stress and lateral strain
[d] shear stress and shear strain
26. The ratio of stress and strain is known as _____
[a] modulus of elasticity [b] youngs modulus
[c] both a and b [d] none of the above

27. The surface of the water in contact with the glass wall is _____

[a] plane [b] concave [c] convex [d] both a and b

28. when impurity is added to a liquid, its surface tension _____.

[a] decreases [b] increases [c] remains same [d] none of these

29. SI unit of surface tension is _____.

[a] Nm^2 [b] Nm [c] N/m [d] N/m^2

30. Rain drop are spherical in shape because of _____

[a] surface tension [b] capillary
[c] downward motion [d] acceleration due to gravity

Gondwana University, Gadchiroli.

Practical exam sem-III (Winter-2020)

Shivaji Mahavidyalaya, Gadchiroli.

Subject: Physics

Time: 6 hrs

Marks: 30

Date: / / 2021

Name of Student:

1) Heat capacity has units as

- (a) J/kg.K (b) J/mol.K (c) J.ohm/sec.K² (d) W/m.k

2) With increase in temperature, thermal conductivity of a metal

- (a) Increases (b) Decreases (c) Either (d) All, depending on metal.

3) Units for thermal conductivity

- (a) J/kg.K (b) J/mol.K (c) J.ohm/sec.K² (d) W/m.K

4) The value of Stefan's constant is

- (a) $5.996 \times 10^{-8} \text{ w m}^{-2} \text{ k}^{-1}$ (b) $4.3219 \times 10^{-8} \text{ w m}^{-2} \text{ k}^{-1}$
(c) $5.6696 \times 10^8 \text{ w m}^{-2} \text{ k}^{-1}$ (d) $5.6696 \times 10^7 \text{ w m}^{-2}$

5) Lee's method for bad conductors a steady current passed through

- (a) heater coil (b) thermo couples (c) thin disk (d) copper plates

6) Searle's method determined by

- (a) conductivity (b) thermal conductivity
(c) co-efficient of thermal conductivity (d) temperature

7).....has the highest value of thermal conductivity.

- a) Copper (b) Aluminium (c) Brass (d) Steel

8) Mechanical equivalent is associate with

- (a) Newton (b) Kelvin (c) Joule (d) Boltzmann

9) The mechanical equivalent of heat is.....

- (a) has the same dimension as heat (b) has the same dimension as energy
(c) has the same dimension as work (d) dimensionless

10) The energy emitted by a black surface should not vary accordance with.....

- a) Wavelength (b) Temperature (c) Surface characteristics (d) Time

11) The Planck's constant h has the dimensions equal to

- a) ML^2T^{-1} (b) MLT^{-1} (c) MLT^{-2} (d) MLT

12) Planck's law is given by.....

- a) $(E)_b = 2 \pi c^2 h (\text{Wavelength})^{-5} / [c h/k (\text{Wavelength}) T]^2$
b) $(E)_b = \pi c^2 h [\text{exponential } [c h/k (\text{Wavelength}) T]^{-3}$
c) $(E)_b = 2 \pi c^2 h (\text{Wavelength})^{-5} / \text{exponential } [c h/k (\text{Wavelength}) T]^{-1}$
d) $(E)_b = 2 c^2 h (\text{Wavelength}) / \text{exponential } [c h/k (\text{Wavelength}) T]^{-6}$

13) The Stefan-Boltzmann constant has units of

- a) $\text{kcal/m}^2 \text{ hr K}^4$ (b) kcal/m hr K^4 (c) kcal/hr K^4 (d) $\text{kcal/m}^2 \text{ K}^4$

14) The Stefan-Boltzmann law of thermal radiation is applicable for

- a) white body (b) gray body (c) black body (d) all the bodies

15) The Stefan-Boltzmann constant depends on the

- a) Medium (b) Temperature (c) Surface (d) None of these

16) Stefan Boltzmann law is applicable for heat transfer by

- a) conduction (b) convection
c) radiation (d) conduction and radiation combined

17) If two events (both with probability greater than 0) are mutually exclusive, then:

- a) They also must be independent b) They also could be independent
c) They cannot be independent. d) They cannot be complements.

18) What happens to the half-life of a radioactive substance as it decays?

- a) It remains constant b) It increases
c) It decreases. d) It could do any of these.

19) A Geiger-Muller tube is a.....

- (a) gas ionization detector (b) cloud chamber
(c) fluorescence detector (d) spectrophotometer

20) Which type of radiation is the least penetrating?

- (a) alpha (b) beta (c) gamma (d) x-ray

Gondwana University, Gadchiroli.

Practical exam sem-V (Winter-2020)

Shivaji Mahavidyalaya, Gadchiroli.

Subject: Physics

Time: 6 hrs

Marks: 30

Date: / / 2021

Name of Student:

- 1) A crystal diode has
 - a) one pn junction
 - b) two pn junctions
 - c) Three pn junctions
 - d) none of the above.
- 2) A crystal diode is used as.....
 - a) an amplifies
 - b) an oscillator
 - c) a Sertifiez
 - d) a voltage regulator
- 3) A Zenez diode is.....device.
 - a) a non-linear
 - b) a linear
 - c) an amplifying
 - d) none of the above.
- 4) Photoelectric effect was explained by.....
 - (a) Einstein
 - b) faznday
 - c) plank
 - d) Hertz.
- 5) The planck's constant h has the dimensions....
 - a) ML^2T^{-1}
 - b) MLT^{-1}
 - c) MLT^{-2}
 - d) MLT .
- 6) The ionization potential of mercury is approximately,
 - a) 5.4 V
 - b) 8.4 V
 - c) 10.4 V
 - d) 16.4 V

7) Hydrogen atom in ground state is excited by a monochromatic radiation of $\lambda = 975 \text{ \AA}$. The number of spectral lines in the Resulting spectrum emitted will be:

- a) 3 b) 2 c) 6 d) 10.

8) E/m ratio of cathode rays was determined by:.....

- a) Faraday b) Rutherford c) Cavendish d) J.J. Thomson

9) Cathode ray consists of

- a) electron b) Proton c) Neutron d) none of these

10) X-rays are produced when strikes on:.....

- a) Non-metal b) metal c) material d) none of these

10) Atomic packing factor is

- a) Distance between two adjacent atoms
b) projected area fraction of atoms in cell
c) vol. fraction of atoms in cell.
d) none.

11) coordination no in simple cubic crystal Structure.

- a) 1 b) 2 c) 3 d) 4

12) The atomic diameter of an BCC crystal is

- a) a b) $a/2$ c) $a/(4/\sqrt{3})$ d) none of these

13) coordination number for closest packed crystal structure

- a) 16 b) 12 c) 8 d) 4

14) magnetic permeability has units as

- a) Wb/m^2 b) Wb/A.m c) A/m d) Tesla /m^2

15) magnetic field strength's units are....

- a) Wb/m^2 b) Wb/A.m c) A/m d) Tesla /m^2

BSc.II year

1. **What is radius ratio?**
2. **Write Borb -Land exation?**
3. **Write any one application ofFAJAN's rule?**
4. **Limitation of Lowry -Brosted theory?**
5. **What is screening effect?**
6. **Defination of ionization potential?**
7. **Explain back- bonding.**
8. **Electronic configuration of Xe?**
9. **Explain Chemical twins.**
10. **What is the position of actinide element in the periodic table.**
11. **Draw structure of Borazine.**
12. **Write any two basiic properties of iodine.**
13. **Draw structure of pyro silicates.**
14. **Explain cubic close packed structure.**
15. **Explain AX5 type of Interhalogen Compounds.**

16. Write statement of Raoult's law of ideal solution.
17. What is Henry's law.
18. Definition of azeotropic mixtures.
19. Draw the graph of phenol-water system.
20. Statement and formula of Nernst distribution law.
21. Write any two applications of distribution law in the process of extraction.
22. Any two limitations of first law of thermodynamics.
23. Write expression of efficiency (η) of Carnot engine.
24. Define Entropy and Entropy change.
25. Explain unit of reaction rate.
26. Write Arrhenius equation.
27. Write any two failures of Collision theory.
28. What is Molarity.
29. What is electron Spin Angular Momentum.
30. What is Magnetic Susceptibility.

One mark questions.

- 1) What is mean by spectroscopy?
- 2) What is chemical shift ?
- 3) What is rubber ?
- 4) What is polymer ?
- 5) How nylon-6,6 is prepared ?
- 6) Write down the structure of nylon- 6,6
- 7) Give two uses of nylon
- 8) Write down the formula of ethyl aceto acetate.
- 9) Write down the reaction of claisen condensation.
- 10) What is green chemistry ?
- 11) What is cathode and anode ?
- 12) What is conductance ?
- 13) What is insulator ?
- 14) Which solution is used in salt bridge ?
- 15) What is reference electrode ?
- 16) What is calomel electode ?
- 17) What is the acid base titration ?
- 18) Which apparatus is used in titration ?
- 19) What is mean by solubility ?
- 20) What is conductivity cell ?
- 21) What is cell constant ?
- 22) What is electrolyte and non electrolyte ?
- 23) What is conductometrically ?
- 24) What is potentiometrically ?

- 25)** Give the example of Strong acid and weak base.
- 26)** What is redox titration ?
- 27)** Which microwave is used in green chemistry ?
- 28)** What is NMR spectroscopy ?
- 29)** What is addition reaction ? , Give an example.
- 30)** What is the spin-spin coupling ?

The end

Class:- B.Sc Ist year Semester -I

Sub:- zoology

Marks:- 30

1) Digestive System of leech consists of: _____

- a) Alimentary Canal & Digestive gland.
- b) Rectum
- c) Crop
- d) pharynx

2) How many pairs of nephridia are seen extending from the 6th to 22nd segments in leech?

- a) 16 pairs
- b) 14 pairs
- c) 17 pairs
- d) 15 pairs

3) Which are pairs of Coelomic Sac situated in the 11th segment.

- a) Common oviduct
- b) ovisacs
- c) oviducts
- d) vagina

4) Earthworm is: _____

- a) Hypospadias
- b) Ambiguous genitalia
- c) Micropenis
- d) Hermaphrodite

5) Each Spermatheca is a _____ shape of structure in female reproductive organs in Earthworm.

- a) flask
- b) oval
- c) narrow
- d) circle

6) Paramecium is commonly known as: _____ (2)

a) Organ pipe coral

b) Slipper animalcule

c) Sea Anemone

d) Venus flower basket.

7) Tubiporea belongs to the class: _____

a) Calcareo

b) Hexactinellida

c) Anthozoa

d) Scyphozoa

8) Aphrodite is a _____ burrowing from in mud in deep water.

a) Fresh

b) Marine and brackish

c) Marine

d) brackish

9) Which is the first larval stage in the life cycle of *Fasciola hepatica*?

a) Antizoea

b) miracidium

c) Cercaria

d) Metacercarium

10) _____ excretory canals are present in T. S. of female Ascaris.

a) one lateral

b) four lateral

c) Two lateral

d) Three lateral

11) Amoeba is a minute organism measuring from _____

a) 0.75 mm to 1.00 mm

b) 0.85 mm to 1.00 mm

c) 0.75 mm to 0.25 mm

d) 0.25 mm to 1.00 mm

12) Euplectella is a _____

- a) barrel sponge
- b) Free swimming sponge
- c) Colony sponge
- d) Solitary sponge

13) Liver fluke causes a disease called: _____

- a) Heart-eat
- b) liver-eat
- c) Intestine-eat
- d) stomach-eat

14) Medusa is: _____

- a) Umbrella like structure
- b) rod like structure
- c) Diamond like structure
- d) Rectangular like structure

15) Entamoeba is a: _____

- a) ciliated protozoans
- b) flagellated protozoans
- c) parasitic protozoans
- d) Amoeboid protozoans

16) The dissecting microscope has a _____ lens system

- a) four
- b) single
- c) triple
- d) double

17) Its cell wall is followed by _____ which is lipoprotein in nature.

- a) Endoplasmic Reticulum
- b) Ribosome
- c) plasma membrane
- d) Mitochondria

18) _____: RBC immersed in isotonic solution retain normal biconcave shape.

- a) In Isotonic solⁿ
- b) In Hypertonic solⁿ.
- c) NaCl solⁿ
- d) In Hypotonic solⁿ.

19) How many stages in of the mitosis ?

- a) Six
- b) Three
- c) Four
- d) Five

20) The polytene chromosomes are also called .

- a) Telocentric
- b) acrocentric
- c) giant chromosomes
- d) Metacentric

21) _____ lie closely connected, together in the anterior part of the 3rd segment.

- a) Sub-pharyngeal ganglia
- b) Circum-pharyngeal connectives
- c) Cerebral ganglia
- d) Ventral nerve Cord.

22) Sub-pharyngeal ganglia lying beneath the pharynx in the posterior part of the _____ .

- a) 2nd segments
- b) 3rd segments
- c) 5th segments
- d) 4th segments

23) How many pairs nervous system of Earthworm ?

- a) Two
- b) Three
- c) Four
- d) Five

24) _____ runs straight back along the mid-ventral line from the sub-pharyngeal ganglia to the posterior end of the body .

- a) Circum-pharyngeal connective
- b) Ventral nerve Cord
- c) Cerebral ganglia
- d) Sub-pharyngeal ganglia

25) How many classes in phylum Coelenterata ?

- a) Three
- b) five
- c) Two
- d) one

26) platyhelminthes are bilaterally symmetrical and dorsoventrally flattened worms is also called; _____

- a) round worms
- b) Earth worms
- c) Flat worms
- d) segmented worms.

27) Nereis is found in : _____

- a) burrows in sand
- b) water
- c) bottom in pond
- d) air

28) Ancylostoma is belongs to the phylum: _____

- a) plathyhelminthes
- b) Annelida
- c) Coelenterata
- d) Aschelminthes

29) class Calcarea is belongs to the phylum: _____

- a) Coelenterata
- b) protozoa
- c) porifera
- d) Annelida

30) How many parts of Compound microscope ?

- a) 15
- b) 11
- c) 5
- d) 10

Practical Exam

(1)

Class: - B.Sc IInd Sem: - III

Sub: - zoology

Marks: - 30

1) In Labeo, true _____ is absent.

- a) Stomach
- b) liver
- c) rectum
- d) anus

2) Testis is continued posteriorly into a _____ duct which opens into the urogenital sinus.

- a) Sperm
- b) genital
- c) oviduct
- d) archinephric duct

3) The pituitary gland is of the lepto-dorso basic type. It consists of: _____

- a) Acidophils & basophils
- b) hypophysis & basophils
- c) neurophysis & adenohypophysis
- d) Neurophysis & basophils

4) The pituitary gland in Labeo is a small _____ shaped

- a) Round
- b) Diamond
- c) pear
- d) long

5) What is the class of Labeo Rohita ?

- a) Cyclostomata
- b) Lepto caedii
- c) Osteichthyes
- d) Ascidiacea

6) *Daliolum* belongs to the Subphylum: _____ (2)

a) Amphibia

b) Cephalochordata

c) Vertebrata

d) Cyclostomata

7) Salamander belong to the Division: _____

a) Gnathostomata

b) Agnatha

c) Hypostomata

d) Myxinoidea

8) *Vaeonus* is commonly known as: _____

a) Flying lizard

b) Monitor lizard

c) Spiny-tailed lizard

d) Lava lizard

9) Large robust bird is: _____

a) Woodpecker

b) Kingfisher

c) Owl

d) Duck

10) _____ lie deep in submucosa and tunica and open in the crypts.

a) Thyroid gland

b) Brunner's gland

c) Sebaceous gland

d) Mucosa

11) Kupffer's cells are attached to the walls of: _____

a) Sinusoids

b) Hepatic cell

c) Bile duct

d) Central vein

12) Which scales are present in teleosts and dipnoi³ fish.

a) placoid scales

b) cycloid scales

c) ctenoid scales

d) cosmoid scales

13) In the T.S. of cartilage the matrix is deposited with numerous: _____

a) lacunae

b) chondrocytes

c) yellow elastic fibres

d) green elastic fibres

14) Which bone is known as breast bone?

a) Xiphisternum

b) Humerus

c) Sternum

d) Pygostyle

15) Sacrum is formed by the fusion of: _____

a) 4 Sacral vertebrae

b) 2 Sacral vertebrae

c) 3 Sacral vertebrae

d) 5 Sacral vertebrae

16) The carbohydrates and carbohydrate rich macromolecules are demonstrated by: _____

a) PAC

b) PAS

c) SAP

d) APT

17) Salivary Amylase is also known as: _____

a) pepsin

b) ptyalin

c) Trypsin

d) maltase

18) The proteins are _____ in a cell.

- a) Omnipotent
- b) amino acid
- c) Albumen
- d) fibrous

19) The lowry method is sensitive to pH changes and therefore pH of assay solution should be maintained at: _____

- a) 12 to 20.5
- b) 10 to 10.5
- c) 10 to 20.5
- d) 10 to 30.5

20) The Response is now positive in all the tests, the presence is disaccharide sugar in the original given solution or powder is _____

- a) Monosaccharides
- b) Benedict's test
- c) Confirmed as disaccharide
- d) Fehling's test.

21) which group belongs in the phylum chordata?

- a) Acronia and Craniata
- b) Agnatha & Gnathostomata
- c) Hypostomata & Osteiophysi
- d) Cyclostomata & Elasmobranchi

22) Nodopterus is commonly known as: _____

- a) Chital
- b) magur
- c) Flying fish
- d) Electric-ray

23) Owl belongs to the class: _____

- a) Reptilia
- b) mammalia
- c) Aves
- d) Amphibia

24) Naja is commonly known as: _____

- a) Krait
- b) Cobra
- c) Sea-Snake
- d) Horned toad

25) Marrow cavity is filled with: _____

- a) bone marrow
- b) bone lacunae
- c) bone lamellae
- d) Canaliculi

26) The skin is composed of: _____

- a) four layers
- b) Three layers
- c) one layer
- d) Two layers

27) what is long from of PAS ?

- a) periodic Alcohol - Schiff
- b) periodic Acid - Schiff
- c) periodic Acid - sulphate
- d) periodic Alcohol - Schiff

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28) what is long form of T.S ?

a) Total Solids

b) Transverse Section

c) Tail Suspended

d) Temperature Shock

29) How many bone are present in Human body ?

a) 207

b) 206

c) 205

d) 208

30) what is long form of L.S.

a) largest surrounded

b) local skull

c) longitudinal section

d) lower section.

Practical Exam

Class: - B.Sc IIIrd Sem: - V

(mark: - 30)

sub: - zoology

Q.1) Calta is belongs to the subclass: _____

a) Osteichthyes

b) Actinopterygii

c) pisces

d) Ganthostomata

Q.2) Cichinus is Commonly called as: _____

a) European Carp

c) Rohu

b) Magur

d) Meigal

Q.3) _____ is Commonly known as. Electric-ray

a) Teteadon

b) Hippocampus

c) Torpedo

d) ~~peris~~ peris

Q.4) Teteadon is belongs to the order: _____

a) Syngnathiforms

b) plectognathi

c) Symptognathi

d) pleuronectiforms.

Q.5) _____ is Commonly called as water flea.

a) Keratella

b) Cypis

c) Daphnia

d) Cyclops.

Q.6) Brachionans is a _____ characterized by a presence of corona, i.e a ciliated wheel like structure

- a) Rotifera
- b) choedata
- c) Aethropoda
- d) Amnclida

Q.7) A nomogeaphic and a _____ methods are described for the estimation of free CO₂ in water.

- a) Conductometric
- b) Complexometric
- c) Titrimetric
- d) Spectrometric

Q.8) The alkalinity of water is a measure of its capacity to _____ the acids.

- a) neutralize
- b) acidic
- c) basic
- d) Alkaline

Q.9) Turbidity waters are _____ and are not accepted for domestic use.

- a) biological organisms
- b) aesthetically displeasomt
- c) Calibration of nephelo - meter
- d) Colloidal particles.

Q.10) ophiocephalus is commonly called as _____.

- a) European Carp
- b) Meigal
- c) Snake-headed fish
- d) Magur.

Q.11) clarias body is _____ and scaleless.

- a) elongated
- b) oval
- c) flattened
- d) narrow

Q.12) The Secchi disk as created in _____ by Angelo ⁽³⁾ Secchi, is a plain white, circular disk 30 cm.

- a) 1868 b) 1861
c) 1856 d) 1865

Q.13) _____ is used to measure turbidity in the laboratory.

- a) Turbidity meter b) Van der Meer Bottle
c) Conductivity meter d) Secchi disk

Q.14) Which group consists of into planktons?

- a) phytoplankton and zooplankton d) Monogonata
c) Crustacea d) Copepoda

Q.15) The PONAR Grab Sampler consists of _____.

- a) Three d) Four
c) Two opposing semi-circular jaws d) one

Q.16) *Pyella peepysilla* commonly known, as: _____

- a) Cotton bollworm b) Stored grain weevil
c) Common pest d) Sugarcane plant hopper.

Q.17) *Litophilus oryzae* is belongs to the family _____

- a) Curculionidae b) Lyrrhidea
c) beetles d) Hemiptera

Q.18) What is the class of *Helicoverpa armigera*? (4)

- a) Reptilia
- b) Arthropoda
- c) Insecta
- d) Annelida

Q.19) How many days life span of *pyrilla perpusilla*?

- a) 14 to 200
- b) 10 to 500
- c) 14 to 600
- d) 1 to 400

Q.20) *pyrilla* is a major pest in Bihar _____.

- a) Maharashtra
- b) Punjab
- c) Tamil Nadu
- d) Bengal

Q.21) *Sitophilus oryzae* life cycle is completed in _____ days.

- a) 36 days
- b) 36-60 days
- c) 36-69 days
- d) 36-65 days

Q.22) *papilio demoleus* adult is a large butterfly having a wingspan of _____ cm.

- a) 6-8 cm
- b) 5-9 cm
- c) 7-8 cm
- d) 6-9 cm

Q.23) What is a larval period of *papilio demoleus* in Summer?

- a) 8 to 14 days
- b) 8 to 10 days
- c) 8 to 16 days
- d) 8 to 15 days.

Q. 24) *Callosobruchus chinensis* females tip of abdomen is exposed while in males it is covered by _____

- a) Thin layer
- b) elytra
- c) Segmented
- d) Hard layer.

Q. 25) *Tribalium Castaneum* optimum conditions are _____ and 60-80% relative humidity.

- a) 33°C
- b) 36°C
- c) 35°C
- d) 32°C

26) Lactometers are used for rapid determination of _____.

- a) upward direction
- b) Down direction
- c) Continuous gravity
- d) Specific gravity

27) Temperature of milk sample at _____

- a) 50-70 °f
- b) 50-80 °F
- c) 50-60 °F
- d) 50-90 °F

28) You should use a pH meter to determine the _____ of the sample. (6)

a) Time

b) density

c) pH

d) force.

29) where, $f =$ _____ .

a) fat content of milk

b) force

c) fat

d) frequency

30) Which is the largest river in India ?

a) Brahmaputra river

b) Ganga River

c) Godavari River

d) Indus river.