B.Sc. IIIrd yr sem-V
Paper-XIII (DSEV-V sec-A)
organic chemistry

* Multiple choice questions (choose the correct option)

(1) pyridine has a delocalized π molecular orbital containing.

(a) 4-electron ✓(b) 6-electrons
(c) 8-electron (d) 12-electrons.

(2) pyridine is less basic than trimethylamine because the lone pair of electrons on N-atom in pyridine resides in.

✓(a) sp^2 hybrid orbital (b) sp hybrid orbital
(c) sp^3-hybrid orbital (d) p-orbital.

(3) pyridine undergoes electrophilic substitution with fuming H_2SO_4 at 350°c to give

(a) 2-pyridine sulphonic acid (b) 4-pyridinesulphonic acid.
✓(c) 3-pyridine sulphonic acid (d) None of these.

(4) Furan react with ammonia in the presence of alumina at 400°c to give.

(a) pyridine (b) Furfural ✓(c) Pyrrole
(d) Furoic acid

(5) pyridine reacts with HCl to form.

(a) pyridinium chloride (b) 2-chloro pyridine
(c) 3-chloro pyridine (d) All of these

(6) Pyridine undergoes nucleophilic substitution with $NaNH_2$ at 100°c to form.

✓(a) 2-amino pyridine (b) 3-amino pyridine

(c) 5-amino pyridine (d) None of these

(7) When aniline is heated with glycerol in the presence of sulphuric acid and nitrobenzene, it gives quinoline. This reaction is called ...

(a) Fischer Synthesis ✓(b) Skraup Synthesis

(c) Diazotisation (d) Corey-House Synthesis.

(8) Pyridine react with mixture of KNO_3 & H_2SO_4 at 300°c to give.

(a) 1-Nitro pyridine (b) 2-Nitro pyridine.

✓(c) 3-Nitro pyridine (d) 4-Nitro pyridine.

(9) Which of the following reagents will react with Furan to form-2-Furansulphonic acid ?

✓(a) SO_3 in pyridine at 100°c (b) Dilute H_2SO_4 at 200°c

(c) SO_2 at 100°c (d) dilute H_2SO_4 at 100°c

(10) Which of the following reagents will react with pyrrole to form 2-formyl pyrrole ?

(a) HCOOH ✓(b) $CHCl_3$/KOH

(c) H_2O_2 (d) $(CH_3CO)_2O$/$SnCl_3$

what is the correct order of reactivity (most reactive first) of Pyrrole, furan and thiophene towards electrophiles?

(a) furan > Pyrrole > thiophene (b) Pyrrole > furan > thiophene

(c) furan > thiophene > Pyrrole (d) thiophene > Pyrrole > furan.

(12) Electrophilic substitution in furan usually occurs at:

(a) the C(4) atom ✓(b) the C(2) atom.

(c) the C(3) atom (d) the O atom

(13) Nitration of pyrrole is best carried out using:

(a) Sulfuric acid (b) ammonium nitrate

✓(c) acetyl nitrate (d) nitric acid

(14) compare the relative reactivities of benzene and

(a) Both pyridine and benzene behave similarly towards electrophile.

✓(b) pyridine is less reactive towards electrophile than benzen

(c) pyridine is more reactive towards electrophiles than benzene.

(d) Both pyridine and benzene undergo reaction with electrophile, but pyridine always forms N-derivatives.

(15) which is most reactive in electrophilic aromatic substitution?

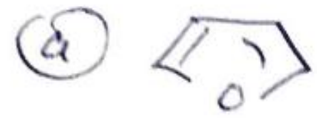
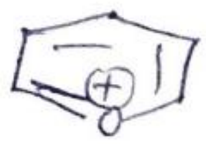
(a) 

✓(b) 

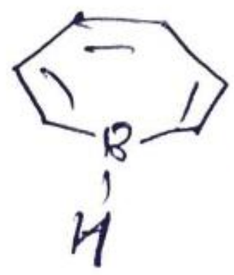
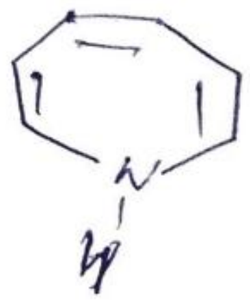
(c) 

(d) 

(16) which is most stabilized by electron delocalization (resonance) ?

(a)  (b)  (c)  (d) 

(17) which of the following is not aromatic?

(a)  (b)  (c)  (d) 

(18) which of the following is anot a five membered ring ?

(a) Pyridine (b) Pyrrole (c) Furan (d) Thiophene

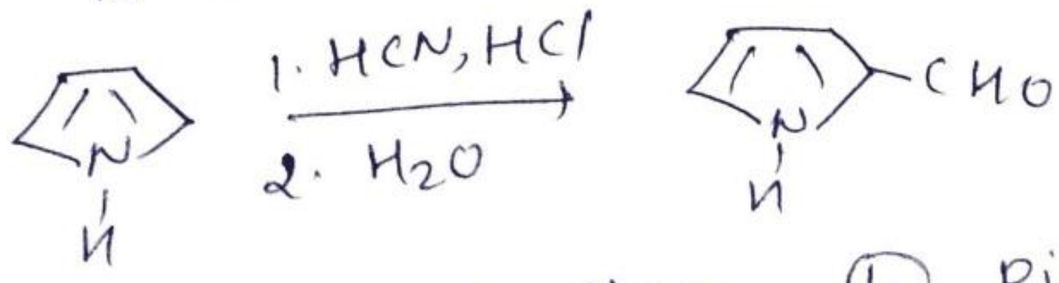
(19) which of the following five membered ring is most resonance stabilized ?

(a) Furan (b) Thiophene (c) pyrrole (d) Pyridine

(20) what is the name of the following reaction ?

(a) Gattermann reaction (b) Riemer tiemann reaction
(c) Friedal craft reaction (d) Blanc's chloromethylation.

(21) what is the name of the following reaction ?



(a) Gattermann reaction (b) Riemer tiemann reaction
(c) Friedal craft reaction (d) Blanc's chloromethylation

pyridine is a which type of heterocyclic compound from the following options?

(a) six membered heterocyclic compound
(b) seven membered heterocyclic compound.
(c) four membered heterocyclic compound.
(d) five membered heterocyclic compound.

(23) which element is present as hetero atom in Pyridine ?

(a) sulphur ✓(b) Nitrogen (c) oxygen (d) sulphur & nitrogen.

(24) which element is present as hetero atom i Thiophene ?

✓(a) sulphur (b) Nitrogen (c) oxygen (d) sulphur nitrogen.

(29) which element is present as heteroatom i furan ?

(a) sulphur (b) Nitrogen ✓(c) oxygen (d) sulphur + nitrogen

(26) what is an alkaloid ?

✓(a) A natural, basic compound with at least one ni atom.
(b) A man made, acidic compound made of mostly nit and carbon.
(c) A natural, acidic compound derived from animal f
(d) A natural compound consisting mainly of carbo and hydrogen atom.

(27) which of the following is a chromophore?

✓(a) $-NO_2$ (b) $-OCH_3$ (c) $-NH_2$ (d) $-OH$

(28) which dyes become linked to the fibre by chemical reaction?

✓(a) Acid dyes (b) Direct dye (c) Disperse dyes.

(d) None of these.

(29) which of the following is an auxochrome &

(a) $-N=O$ (b) $-NO_2$ (c) $-N=N-$ ✓(d) $-OH$.

(30) colour of a compound is best explained by

(a) Molecular orbital theory (b) valence bond theory (c) Witt's theory (d) None of these

(31) Dyes should be resist the action of - - -

(a) water (b) soap (c) light.

✓(d) All of these.

(32) Diazotised sulphanilic acid is treated with N,N-dimethyl aniline to gives - -

✓(a) methyl orange (b) congo red (c) Malachite green

(d) phenolphthalein..

(33) phthalic anhydride on condensation with catechol ~~with~~ in the presence of H_2SO_4 at 180°c gives....

(a) methyl orange ✓(b) Alizarin (c) congo red

(d) None of these.

phenol is react with phthalic anhydride in the presence of conc. H_2SO_4 to gives - - -

(a) phenolphthalein (b) methyl orange

(c) Alizarin. (d) None of these

(35) Armstrong's theory are explained - - - are coloured.

(a) chromophore (b) Auxochrome (c) Quinoid compound (d) None of these

(36) with's theory are explained - - -

(a) Auxochrome (b) chromophore (c) both (a) & (b)

(d) Quinoid.

(37) A substance which is used in the prevention, ~~diagnosis~~ diagnosis, treatment or to cure disease in man and other animals is called - - as - -

(a) drug (b) dyes (c) Both (a) + (b)

(d) None of these.

(38) which of the following statements is/are correct for qualities of good drugs. ?

(a) It should be minimum side effect

(b) It should not have any toxicity

(c) It should not injure host tissue or physiologic processes.

(d) All of these.

(39) Drug which stimulate or depress the vast functions of the body to get relief without curing the disease, it is called as...

(a) functioned drugs (b) chemotherapeutic Drugs.

(c) both (a) & (b) (d) None of these.

(40) The Drugs which are responsible for lowering the ~~body~~ temperature of a feverish organism to normal body temperature, such drug ~~are~~ called as.....

(a) Anasthetic ✓(b) Antipysetic (c) Analgesic

(d) None of there.

(41) Drugs which used to believe the pain without loss of consciousness...

(a) Ancesthetics (b) Antipysetics ✓(c) Analgesics

(d) All of these

(42) ..... are the drugs which are used to produce insensibility to vital functions of all types of cells, especially of the nervous system.

✓(a) Anaesthetics (b) Antipyretic. (c) Analgesic

(d) None of Those

Diabetis is disease which is caused by the deficiency of effective ~~insuttin~~ ....

✓(a) Insulin (b) WBC (c) RBC (d) None of these

(44) The drug which is used for the treatment of mental disorder patients. such drugs are called as ...

(a) Anaesthetic (b) Antipyretic ✓(c) Tranquilizer

(d) None of these

(45) The treatment of infectious diseases which are caused by bacteria, ~~it is called~~ such type substance is calledas ....

(a) Antimalarials ✓(b) Antibacterial

(c) ~~Antifungal~~ Antifungal (d) All of these

(46) The p-amino phenol is treated with acetic anhydride & sodium acetate to give.

(a) Asprin ✓(b) p-Acetamol (c) Both (a) & (b)

(d) None of these.

(47) when salicyclic acid is heated with acetic anhydride & conc. H_2SO_4 to gives ...

✓(a) Asprin (b) p-Acetamol (c) Both (a) + (b)

(d) ~~All~~ None of these.

(48) Sulphanilamide is used as ....

✓(a) Antibacterial (b) Antimalarial

(c) Antiviral (d) None of these

(49) The substance which are used for the treatment of infectious diseases caused by the viruses are called as ...

(a) Antibacterial (b) Antifungal ✓(c) Antiviral

(d) Antimalarial.

(50) Tolbutamide is used as a ...

(a) Antimalarial ✓(b) Antidiabetic

(c) Antifungal (c) Antiviral.

(51) Isoniazide is used as a ...

✓(a) Antitubercular (b) Antimalarial

(c) Antifungal (d) Antiviral.

(52) Alkaloids are occurs in a ...

(a) bark & plant (b) seed & plant (c) leaves & fruit plant

✓(d) All & these

which of the following statements is/are correct.

(a) Alkaloid are generally bitter in taste.

(b) Alkaloid are optically active

(c) Alkaloid contain at least one nitrogen in their heterocyclic sings.

✓(d) All of these

(54) The molecular formula of Ephedrine is.—

✓(a) $C_{10}H_{15}NO$ (b) $C_{10}H_{14}N_2$ (c) $C_{10}H_9N$

(d) None of these

(55) The molecular formula of Nicotine is.—

(a) $C_{10}H_{15}NO$ ✓(b) $C_{10}H_{14}N_2$ (c) $C_{10}H_9N$.

(d) None of these.

(56) The oxidation of Ephedrine to gives.—

✓(a) Benzoic acid (b) Nicotinic acid (c) Acetic acid (d) None of thye

(57) The oxidation of Nicotine to gives.—

(a) Benzoic acid ✓(b) Nicotinic acid

(c) Acetic acid (d) None of these.

(58) The deficiency of vitamin A is ...

✓(a) Night blindness (b) blood coagulation

(c) paralysis (d) None of these

(59) The sources of vitamin E is ...

(a) Soyabean oil (b) cotton seed oil

(c) palm oil ✓(d) All of these

(60) The sources of vitamin K is ...

(a) carrot (b) cabbage (c) Spinach.

✓(d) All of these

(61) The deficiency of vitamin B_2 causes ...

(a) glossitis (b) cheilosis ✓(c) both (a) & (b)

(d) None of these.

(62) The source of vitamin-C are ...

(a) lemons (b) oranges (c) black currant

✓(d) All of these

(63) Deficiency of vitamin C- causes ...

✓(a) scurvy (b) paralysis (c) Night blindness

(d) None of these

The substance which are used to damage (or) Kill the insect such substances known as . . . .

(a) Insecticides (b) fungicides (c) Herbicides

(d) Rodenticides.

(65) The substance which are used to inhibit (or) Kill the growth of fungi; such substance is known as . . . .

(a) Insecticides ✓(b) fungicides (c) Herbicides

(d) Rodenticides

(66) The substance which are used to Kill the unwanted plants, weeds as target such substance is known as . . . .

(a) Insecticides (b) fungicides ✓(c) Herbicides

(d) Rodenticides.

(67) The chemical substance which are used to Kill the rats / mouse / rodents, such substeance is known as.

(a) Insecticides (b) fungicides.

(c) Herbicides ✓(d) Rodenticides

(68) The condensation of one mole of chloral with two moles of chlorobenzene in presence of conc. H_2SO_4 at about 30°c to gives...

✓(a) DDT (b) 2,4-D (c) BHC (d) None of these.

(69) Benzene is react with chlorine gas in presence UV-light to gives ---

✓(a) BHC (b) 2,4-D (c) DDT (d) None of these

(70) 2,4-dichloro phenol is heated with chloro acetic acid to gives ----

(a) BHC (b) DDT ✓(c) 2,4-D.

(d) None of these