**Topic 2.3. Warehousing logistics for a pharmaceutical organization.**

**Tests . Select one or more correct answers**

**1. Characteristics of space-planning and design solutions of warehouse buildings:**

1. step

2. span

3. floor height

4. length

5. width

 **2. Select warehouse operations:**

 1. unloading and acceptance of goods

 2. placement for storage (placing goods in racks, stacks)

 3. packaging and shipment of goods

 4. intra-warehouse transportation of goods

 5. all answers are correct

**3. The following types of warehousing activities are distinguished:**

1. receiving goods from suppliers

2. applying barcodes to materials for identification purposes

3. sorting goods and storing goods

4. inventory management and packing of goods

5. loading goods onto transport vehicles for delivery to the customer

**4. The storage room complex includes:**

1. receiving room (area)

2. room (area) for sampling of medicinal products in accordance with the requirements of the OFS ‘Sampling’.

3. room (zone) for quarantine storage of medicinal products

4. room for medicinal products requiring special storage conditions

5. room (area) for storage of rejected, returned, recalled and/or expired medicinal products

**5. If on the package of medicinal products as storage conditions it is stated ‘does not require special storage conditions’ without requirements for light- and moisture-protective packaging, it means :**

1. temperature from 15 to 25 ° C

2. temperature from 10 to 15 ° C

3. temperature from 10 to 25 **° C**

4. temperature from 20 to 25 **° C**

5. temperature from 15 to 25 **° C**

6. The wording ‘Do not freeze’ and there are no other indications in the pharmacopoeial article and other regulatory documentation means the temperature :

1. not below +2 ° C

2. not lower than +5 °**C**

3. not lower than +1 °**C**

4. not lower than 10 **° C**

5. not lower than 15 **° C**

**7. In rooms for storage of medicinal products are placed in accordance with the requirements of regulatory documentation indicated on the packaging of medicinal products according to:**

1. physico-chemical properties of medicinal products

2. pharmacological groups (for pharmacy and medical organisations)

3. route of administration

4. aggregate state of pharmaceutical substances

5. all answers are correct

**8.** **Pharmacy organisations may store pharmaceutical substances with flammable and combustible properties outside the premises in the amount of**

1. up to 10 kg

2. up to 15 kg

3. up to 25 kg

4. up to 20 kg

5. up to 30 kg

**9.** **At manual method of unloading and loading works the height of stacking of medicines should not exceed :**

1. 1,5 м

2. 2,0

3. 2,5

4. 1,0

5. 3,0

**10.** **Which of the following temperatures fulfils the requirement to ‘ store in a cool place:**

1. up to +15 ° C

2. up to +10 ° C

3. up to +20 ° C

4. up to +5 ° C

5. all correct

**11.** **Which group of pharmaceutical substances should be stored in paraffin-coated, hermetically sealed glass containers?**

1. pharmaceutical substances with pronounced hygroscopic properties

2. pharmaceutical substances requiring protection against volatilisation and drying out

3. pharmaceutical substances crystalline hydrates

4. pharmaceuticals with a defined lower limit of moisture content

5. odorous pharmaceuticals

 **Tasks**

1. During a routine inspection of a pharmacy organisation, it was found that storage of alcohol in a container had a fill rate of 95% of the volume, and storage of alcohol in a metal container with a fill rate of more than 75%.

*Give an assessment of compliance with the rules for storage of these products ?.*

**2**. During a scheduled inspection of a pharmacy organisation, it was found that potent and poisonous medicines under international control and narcotic and psychotropic medicines were stored in one technically reinforced room.

*Give an assessment of compliance with the rules of storage of these drugs?.*

3. During a routine inspection of a manufacturing pharmacy organisation it was found that dyeing medicines (pharmaceutical substances that leave a coloured mark, which cannot be washed off by conventional sanitary and hygienic treatment, on containers, closures, equipment and inventory (brilliant green, methylene blue, indigo carmine) were stored in a special cabinet in tightly sealed containers. However, in the act the commission indicated the violations that took place.

*Please explain what violations they are?*

 **4**. Pharmaceutical substances requiring protection from moisture, the pharmacy stored in a cool place at a temperature up to + 20 degrees C (hereinafter - cool place), in tightly sealed containers made of materials impermeable to water vapour (glass, metal, aluminium foil, thick-walled plastic containers). C (hereinafter - cool place), in tightly closed containers made of materials impermeable to water vapour (glass, metal, aluminium foil, thick-walled plastic containers) or in primary and secondary (consumer) packaging of the manufacturer.

*What is the violation?*

 **5** During manual unloading and loading operations, the height of stacking of medicines in the warehouse exceeded 1.5 m.

 *Give an estimate?*

 **6**. During the scheduled inspection of the production pharmacy organisation it was found that continuous control of the temperature regime during storage of thermosensitive (thermolabile) medicinal products in refrigerated chambers, cabinets, refrigerators was carried out using thermographs and thermoregisters, the readings of which, in case of immunobiological medicinal products, were registered daily and recorded in the logbook.

*Give an assessment of the correctness of the procedure?*

 **7.** The head of the stock department, during the regular inspection of preparations, found that the packaging of a medicinal product indicated ‘Does not require special storage conditions’ as storage conditions, the preparation was placed in a cabinet with a temperature of 15 to 20 ° C, without requirements for light- and moisture-proof packaging.

*Give an assessment of the correctness of the procedure?*

**8.** The head of the stock department, during the regular inspection of the preparations, found that the preparation labelled ‘Do not freeze’ was stored at a temperature below +2°.

*Give an assessment of the storage procedure?*

**Theoretical issues.**

**1.** Name the complex of warehouse premises required for pharmaceutical activities (storage of medicines)

2. general requirements for the design and operation of storage facilities for medicinal products

3. general requirements for the premises for storage of medicines and organisation of their storage

4. What is meant by the concept of identification of stored medicinal products and how it is carried out.

5. Requirements to the premises for storage of flammable, explosive and narcotic drugs.

6. Rules of storage of medicines depending on their propertie.

7.Describe the general rules of storage of medicines.

8. Describe the specifics of storage of explosive, flammable medicines