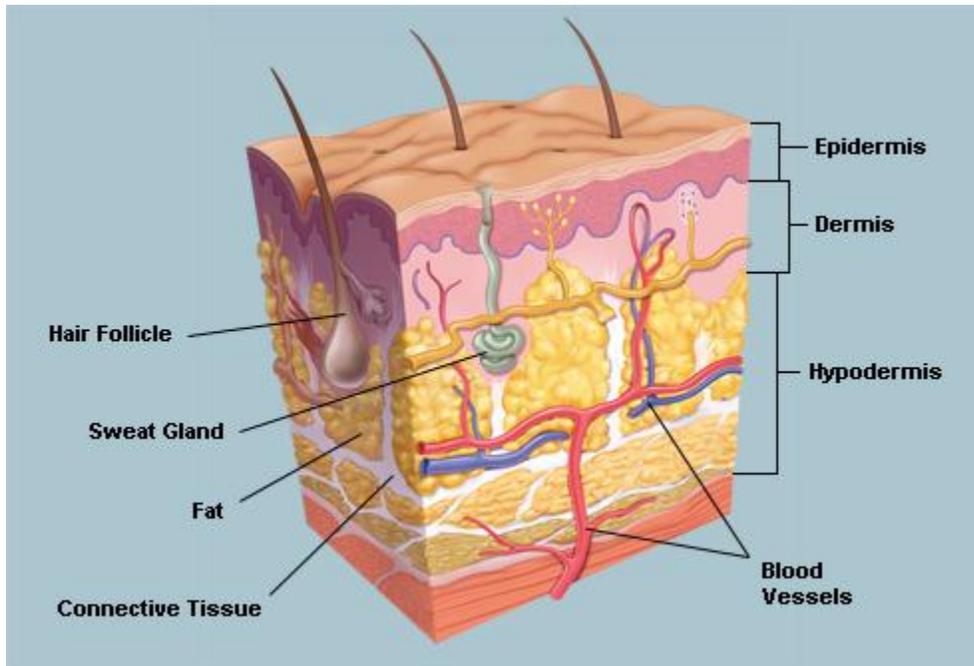


Science Olympiad Summer Study Session – 2013

Division B – Anatomy

Integumentary System Test - Answer Sheet

A. Label the parts of the skin: (2 points x 8 = 16 points)



B. True or False? (2 points x 10 = 20 points)

1. True
2. True
3. True
4. False
5. True
6. True
7. False
8. True
9. True
10. True

C. Multiple Choice Questions: (2 points x 10 = 20 points)

- 1) b. Skin Cancer
- 2) c. Too much time indoors and usage of strong sunscreens
- 3) d. Fibroblasts
- 4) b. Major mechanism to maintain body warmth
- 5) c. Melanin changes
- 6) d. Stratum Basale
- 7) c. Superficial
- 8) c. Hypodermis – Connection
- 9) b. Elastic
- 10) d. Stratum Basale

D. Fill in the blanks: (2 points x 12 = 24 points)

1. The dermis is composed mainly of **connective tissue**.
2. The secretion which lubricates and inhibits the growth of bacteria on the skin is called **sebum**.
3. Hair develops from a group of epidermal cells at the base of a tube-like depression called a(n) **follicle**.
4. Mammary glands are modified **sweat glands**.
5. The stratum germinativum contains both stem cells and **melanocytes**.
6. An abnormal growth in epidermal cells is most likely **basal cell carcinoma**.
7. The characteristic protein of hair and nails is the fibrous, insoluble protein called **keratin**.
8. The terms “thick skin” and “thin skin” are used in reference to the relative thickness of the **epidermis** and not to the skin as a whole.
9. The thick skin of the palms and the soles has epidermal **ridges** that increase friction and improve gripping ability.
10. Both the **autonomic** nervous system and hormones control secretion by glands and contraction of myoepithelial cells.
11. Sebum is produced in **Sebaceous** glands.
12. Sweat is produced in **Sudoriferous** glands.

E. Match the following: (1 point x 10 = 10 points)

- | | |
|-------------------------|--------------------------------|
| 1) Keratinocytes | Protection and Water-proof |
| 2) Merkel cells | Sensory Receptors |
| 3) Langerhans cells | Helps immunity |
| 4) Basal cell carcinoma | Common cancer but easy to cure |
| 5) Melanoma | Fatal and complicated cancer |
| 6) Stratum Basale | Cell Division |
| 7) Melanin | Gives skin color |
| 8) Palm | Stratum Lucidum |
| 9) Botox | Skin treatment |
| 10) Basal cells | Stem cells |

F. Diagnose the skin diseases: (5 points x 2 = 10 points)

Picture 1:



Picture 2:



Picture 1: Athlete's Foot

Causes:

- Fungal infection
- Sweaty feet, tight shoes, wet feet

Remedies:

- antifungal sprays & creams

Picture 2: Warts

Causes:

- viral infection of the skin or mucous membrane

Remedies:

- Chemicals/medications (over the counter & prescribed)
- Freezing warts with liquid nitrogen **OR** burning (more serious)