```python
import time
import random
from datetime import datetime

# Thresholds for detecting anomalies
STRAIN_THRESHOLD = 80
VIBRATION_THRESHOLD = 10
TEMPERATURE_THRESHOLD = 50

# Simulate sensor data
def get_sensor_data():
    strain = random.uniform(40, 100)        # simulate strain
    vibration = random.uniform(2, 12)       # simulate vibration
    temperature = random.uniform(25, 60)    # simulate temperature
    return strain, vibration, temperature

# Check for anomalies
def check_anomalies(strain, vibration, temperature):
    issues = []
    if strain > STRAIN_THRESHOLD:
        issues.append("High strain")
    if vibration > VIBRATION_THRESHOLD:
        issues.append("Excessive vibration")
    if temperature > TEMPERATURE_THRESHOLD:
        issues.append("High temperature")
    return issues

# Main loop
def monitor_structure():
    log_file = open("monitor_log.txt", "w")
    log_file.write("Timestamp, Strain, Vibration, Temperature, Anomalies\n")

    for _ in range(30):  # simulate 30 readings
        strain, vibration, temperature = get_sensor_data()
        issues = check_anomalies(strain, vibration, temperature)
        timestamp = datetime.now().strftime("%Y-%m-%d %H:%M:%S")

        log_line = f"{timestamp}, {strain:.2f}, {vibration:.2f}, {temperature:.2f}, {', '.join(issues) if issues else 'None'}"
        print(log_line)
        log_file.write(log_line + "\n")

        if issues:
            print("⚠ ALERT:", ", ".join(issues))

        time.sleep(1)  # simulate 1 second delay

    log_file.close()
    print("Monitoring completed. Check 'monitor_log.txt' for full log.")

if __name__ == "__main__":
    monitor_structure()
```

OUTPUT

```
PS C:\Users\Vishveswar\vsc> & C:/Users/Vishveswar/AppData/Local/Programs/Python/Python313/python.exe c:/Users/Vishveswar/vsc/shm_nm3.py
2025-05-07 14:13:21, 94.94, 8.23, 34.91, High strain
⚠ALERT: High strain
2025-05-07 14:13:22, 90.63, 9.99, 53.30, High strain, High temperature
⚠ALERT: High strain, High temperature
2025-05-07 14:13:23, 92.20, 5.15, 55.39, High strain, High temperature
⚠ALERT: High strain, High temperature
2025-05-07 14:13:24, 41.36, 5.12, 44.24, None
2025-05-07 14:13:25, 47.68, 11.12, 52.31, Excessive vibration, High temperature
⚠ALERT: Excessive vibration, High temperature
2025-05-07 14:13:26, 44.39, 6.88, 32.87, None
2025-05-07 14:13:27, 48.47, 9.16, 55.83, High temperature
⚠ALERT: High temperature
2025-05-07 14:13:28, 70.38, 11.26, 56.04, Excessive vibration, High temperature
⚠ALERT: Excessive vibration, High temperature
2025-05-07 14:13:29, 96.22, 9.67, 59.32, High strain, High temperature
⚠ALERT: High strain, High temperature
2025-05-07 14:13:30, 45.26, 3.61, 40.27, None
2025-05-07 14:13:31, 80.91, 8.56, 47.13, High strain
⚠ALERT: High strain
2025-05-07 14:13:32, 98.64, 9.83, 31.71, High strain
⚠ALERT: High strain
2025-05-07 14:13:33, 67.38, 10.19, 53.86, Excessive vibration, High temperature
⚠ALERT: Excessive vibration, High temperature
2025-05-07 14:13:34, 93.70, 6.50, 36.73, High strain
⚠ALERT: High strain
2025-05-07 14:13:35, 93.89, 8.75, 43.39, High strain
⚠ALERT: High strain
2025-05-07 14:13:36, 99.75, 7.18, 57.66, High strain, High temperature
⚠ALERT: High strain, High temperature
2025-05-07 14:13:37, 69.99, 9.83, 27.37, None
2025-05-07 14:13:38, 92.66, 7.74, 56.48, High strain, High temperature
⚠ALERT: High strain, High temperature
2025-05-07 14:13:39, 49.13, 3.51, 27.91, None
2025-05-07 14:13:40, 85.15, 10.67, 40.94, High strain, Excessive vibration
⚠ALERT: High strain, Excessive vibration
2025-05-07 14:13:41, 95.92, 9.79, 34.02, High strain
⚠ALERT: High strain
2025-05-07 14:13:42, 96.18, 3.82, 50.69, High strain, High temperature
⚠ALERT: High strain, High temperature
2025-05-07 14:13:43, 76.60, 7.48, 42.76, None
2025-05-07 14:13:44, 57.45, 7.64, 44.15, None
2025-05-07 14:13:45, 73.37, 6.29, 47.52, None
2025-05-07 14:13:46, 78.74, 3.80, 51.38, High temperature
⚠ALERT: High temperature
2025-05-07 14:13:47, 68.56, 2.19, 35.97, None
2025-05-07 14:13:48, 55.61, 3.76, 36.99, None
2025-05-07 14:13:49, 53.88, 6.44, 38.32, None
2025-05-07 14:13:50, 64.66, 10.06, 44.09, Excessive vibration
⚠ALERT: Excessive vibration
Monitoring completed. Check 'monitor_log.txt' for full log.
```